User Manual

POC-176

Intel Core 2 Duo Processor-based Point of Care Terminal with 17" TFT LCD

Trusted ePlatform Services

ADVANTECH

Instructions for the User

The document combines text and illustrations, providing a comprehensive overview of the system. The information is presented as sequential steps of action, allowing the user to learn directly how to use the device.

The text provides explanations and instructs the user step-by-step in the practical use of the product, with short, clear instructions in easy-to-follow sequence.

Definitions

Warning! *A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.*

Caution! *A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the equipment or other property.*

Note! *A NOTE provides additional information intended to avoid inconveniences during operation.*

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Safety Instructions

Strictly follow these Instructions for Use, please read these safety instructions carefully.

You are reminded to keep this User's Manual for later reference, and any use of the product requires full understanding and strict observation of all portions of these instructions. Observe all WARNINGS and CAUTIONS as rendered throughout this manual and on labels on the equipment.

Repair of the device may only be carried out by trained service personnel. Advantech recommends that a service contract be obtained with Advantech Service and that all repairs also be carried out by them. Otherwise the correct functioning of the device may be compromised.

Warning! *Because of the danger of electric shock, never remove the cover of a device while it is in operation or connected to a power outlet.*

If one of the following situations arises, have the equipment checked by service personnel:

a. The power cord or plug is damaged.
b. Liquid has penetrated the equipment.
c. The equipment has been exposed to moisture.
d. The equipment does not work well, or you cannot get it to work according to the user's manual.
e. The equipment has been dropped and damaged.
f. The equipment has obvious signs of breakage.

Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning and keep this equipment away from humidity.

Caution! *To avoid short-circuits and otherwise damaging the device, do not allow fluids to come in contact with the device. If fluids are accidentally spilled on the equipment, remove the affected unit from service as soon as possible and contact service personnel to verify that patient safety is not compromised.*

Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

Caution! *To prevent overheating, it is recommended to install the unit in an upright position. Do not lie it flat on a table and do not cover the openings or place the device in direct sunlight or near radiant heaters.*

Make sure the voltage of the power source is correct before connecting the equipment to the power outlet. Position the power cord so that people cannot step on it. Do not place anything over the power cord. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over voltage.

Caution! *Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20°C (-4°F) or above 60°C (140°F). This may damage the equipment.*

If your computer clock is unable to keep accurate time or the BIOS configuration resets to default, please check the battery.

Caution! *Do not replace the battery yourself. Please contact a qualified technician or your retailer.*

The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Improper installation of VESA mounting can result in serious personal injury! VESA mount installation should be completed by a professional technician, please contact the service technician or your retailer if you need this service. The detailed installation procedure is specified in Appendix A.

CLASSIFICATION:

- Supply Class I adapter
- No applied parts
- IPX1
- Continuous operation
- Not AP or APG category

Warning! *This device is not suitable for use in the presence of flammable anesthetic mixtures with air, oxygen, nitrous oxide, or as a life support system.*

Maintenance: To properly maintain and clean the surfaces, use only the approved products or clean with a dry applicator.

Caution! *When servicing the device, always use replacement parts that meet Advantech standards. Advantech Medical cannot warrant or endorse the safe performance of third-party replacement parts for use with our medical device.*

Make sure users do not come in contact with SIP/SOPs and the patient at the same time.

When connecting electrical devices, the operator is responsible for ensuring that the resulting system meets the requirements set forth by the following standards:

EN 60601-1 (IEC 60601-1)

Medical electrical equipment

Part 1: General requirements for safety

EN 60601-1-1 (IEC 60601-1-1)

Medical electrical equipment

Part 1-1: General requirements for safety

Collateral standard: Safety requirements for Medical electrical systems

EN 60601-1-2 (IEC 60601-1-2)

Medical electrical equipment

Part 1-2: General requirements for safety

Collateral standard: Electromagnetic compatibility; Requirements and tests

Medical Equipment
With Respect to Electric Shock,
Fire, and Mechanical Hazards Only,
In Accordance with UL 60601-1,
CAN/CSA C22.2 No. 601.1, and
IEC 60601-1

Accessory equipment connected to the analog and digital interfaces must be in compliance with the respective nationally harmonized IEC standards (i.e. IEC 60950 for data processing equipment, IEC 60065 for video equipment, IEC 61010-1 for laboratory equipment, and IEC 60601-1 for medical equipment). Furthermore all configuration should comply with the system standard IEC 60601-1-1. Anyone who connects additional equipment to the signal input or signal output is configuring a medical system, and is therefore responsible that the system complies with the requirements set forth in standard IEC 60601-1-1. The unit is for exclusive interconnection with IEC 60601-1 certified equipment in the patient environment and IEC 60XXX certified equipment outside of the patient environment. If in doubt, consult the technical services department or your local representative.

FCC Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with this user's manual, it may cause harmful interference to radio communications.

Note that even when this equipment is installed and used in accordance with this user's manual, there is still no guarantee that interference will not occur. If this equipment is believed to be causing harmful interference to radio or television reception, this can be determined by turning the equipment on and off. If interference is occurring, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to a power outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning! *Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could void your authority to operate the equipment.*

List of Accessories

Before installing your Point-of-Care Terminal, ensure that the following materials have been received:

- POC-176 series Point-of-Care Terminal
- Accessories for POC-176
  - CD-ROM disc-"Drivers, User's manual and Utilities"
  - Mounting kits and packet of screws
  - VESA mounting note x1
  - China RoHs note x1

Warning! *No user serviceable parts inside, refer servicing to qualified personnel.*

Only the accessories indicated on the list of accessories above have been tested and approved to be used with the device. It is strongly recommended that only these accessories be used in conjunction with the specific device. Otherwise the correct functioning of the device may be compromised.

Additional Information and Assistance

Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:

- Product name and serial number
- Description of your peripheral attachments
- Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages
- This equipment is a source of electromagnetic waves. Before use please make sure that there are not EMI sensitive devices in its surrounding which may otherwise malfunction.

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Chapter 1

General Information

Sections include:

- Introduction
- Specifications
- Dimensions

1.1 Introduction

The POC-176 is a multimedia Intel Core 2 Duo Mobility processor-based computer that is designed to serve as a Point of Care terminal (POC.) It is a PC-based system with 17" color TFT LCD display, single DVI-I port, dual on-board 10/100/1000 PCI-E Ethernet controller, quad COM ports, quad USB 2.0 ports and a 24-bit stereo audio controller. With an optional 2.5" SATA HDD drive, the POC-176 is an user-friendly computer. For system integrators, this highly integrated multimedia system lets you easily build a Point of Care terminal into your applications. The POC-176 makes it an ideal and safe point of care solution for patients and hospital practitioners.

The POC-176 is specially designed to resist spills and water damage, and ensures dust resistance with its protected LCD, and sealed ports. The high contrast ratio (800:1) of POC-176 makes it a perfect image terminal for PACS and DICOM applications. The POC-176 is a reliable solution to your application's processing requirements.

1.2 Specifications

Computing System	Chipset	945GME/ ICH7M Chipset
	CPU	Intel® Core 2 Duo Processor T7400 (2.16 GHz 667 MHz 4 MB Unified 34 watts 1.1625 V-1.3 V 100°C 478µFC-PGA)
	Front Side Bus	533/667 MHz
	Memory	DDR2 533/667 Unbuffered Non ECC SODIMM sockets x 2 (max. 4 GB) * Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.
Graphics	Controller	Intel GMA 950 Graphics technology Up to 224 MB of DVMT for graphics memory
Expansion Slot	Mini PCIe	1 x Mini PCI slot, supports type IIIA Mini PCI
	PCI 2.2	1 x PCI 2.2, accept low profile PCI Card
Storage	HDD	1 x 2.5” SATA
Ethernet	Interface	2 x Gigabit Ethernet (isolated) interface (RJ-45)
Identification		1 x Smart card reader
I/O Ports		2 x RS-232(isolated), 1x RS-232 and 1x RS232/422/485(isolated) serial port; 4 x USB 2.0 ports; 1 x IEEE 1394b ports 1 x PS/2 mouse and K/B; 1 x DVI-I VGA port;
Speakers		2 x 1 W speakers; 1 x MIC-in and Speaker-out

Display	Display type	17" TFT LCD.
	Max. Resolution	1280 x 1024
	Max. Colors	16.7M colors (RGB 6-bits + FRC data)
	Dot size (mm)	0.264 (per triad) x 0.264
	Viewing angle	160°/160°
	Luminance	300 cd/m^2
	Contrast ratio	800 : 1
	LCD MTBF	50,000 hours
	Backlight lifetime	50,000 hours at 6.5 mA
Power Supply	AC Model	Internal ATX power supply
	Input voltage	100 ~ 240 V_{AC} , 5/3 A max. @ 50 ~ 60 Hz
	Output voltage	+3.3 V @ 16 A, +5 V @ 18 A, +12 V1 @ 16 A, +12 V2 @ 16 A, +5 Vsb @ 2.5 A, -12 V@ 0.5 A, -5 V @ 0.2 A(300W)
Optional Touch-screen	Type	Analog Resistive
	Resolution	Continuous
	Light transmission	75%
	Controller	RS-232 interface (use COM5)
	Durability	30 million touches
Certification		CE,FCC approved
		UL60601-1,EN60601-1 approved
Environment	Temperature	0 ~ 40° C (32 ~ 104° F) (Operating)
	Humidity	10 ~ 95% @ 40°C (non-condensing)
	Shock Resistance	30G peak acceleration (11ms duration)
	Power MTBF	100,000hrs
	Water/dust Resistance	IPX1 compliant
Physical Characteristics	Dimensions (W x H x D)	437 x 377 x 132 mm (17.20” x 14.84” x 5.20”)
	Weight	10 kg

Cleaning/Disinfecting

During normal use of the Tablet PC, it may become soiled and should, therefore, be cleaned regularly. Agents: Green tinctured soap and Enzymatic detergents

Steps:

1. Wipe the Tablet PC with a clean cloth that has been moistened in the cleaning solution.
2. Prepare agent per manufacturer's instructions or hospital protocol.
3. Wipe thoroughly with a clean cloth

Caution!

Do not immerse or rinse the POC-176 and its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed unit regarding the continued safety of the unit before placing it back in operation.

Do not spray cleaning agents on the chassis.

Do not use disinfectants that contain phenol. Do not autoclave or clean the POC-176 or its peripherals with strong aromatic, chlorinated, ketone, ether, or Esther solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.

Note!

The Point-of-Care Terminal with the optionally installed touchscreen will share COM5. Once the touchscreen is installed, COM5 cannot be used for other purposes.

Optional Modules

- **Memory:** 1GB, 2GB DDR2 533/667MHz DRAM
- **HDD:** 2.5" SATA HDD
- **Touchscreen:** Analog resistive

1.3 Dimensions

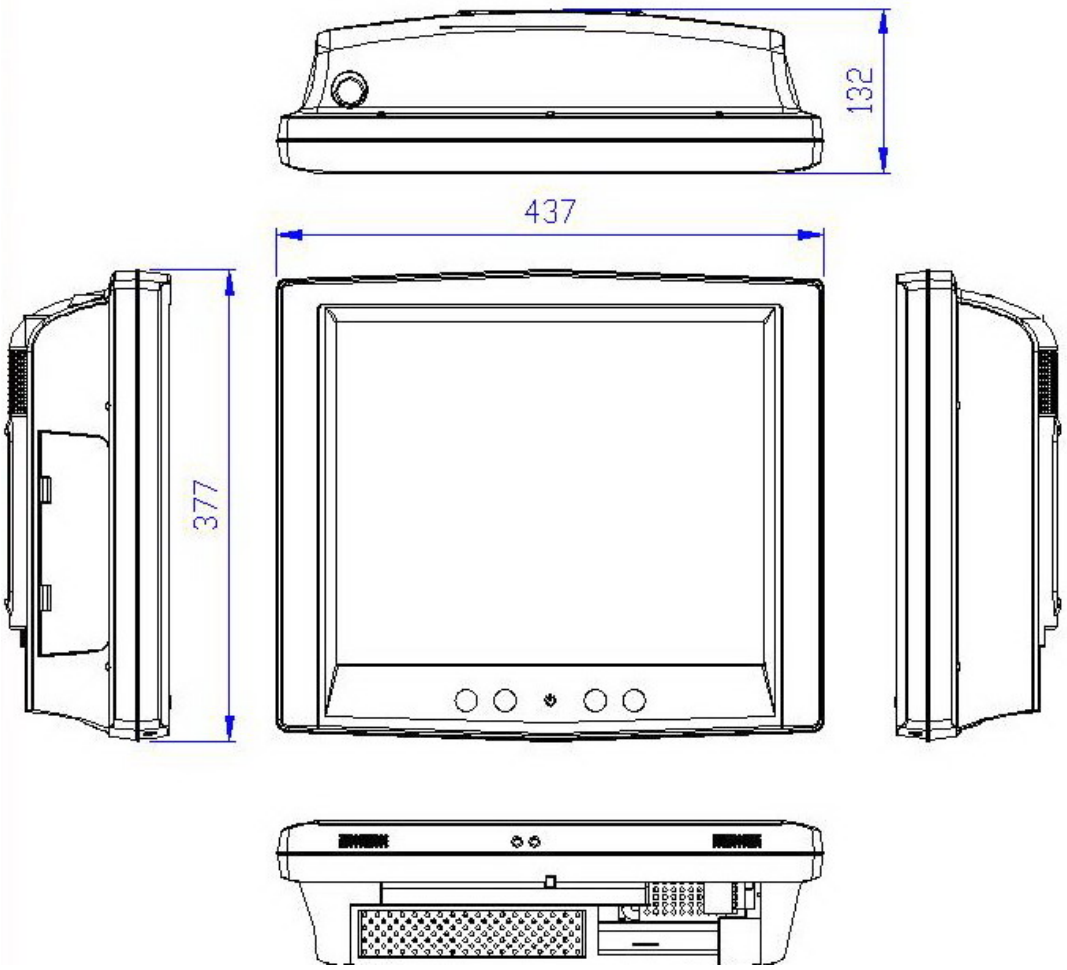


Figure 1.1 Dimensions of the POC-176

Chapter 2

System Setup

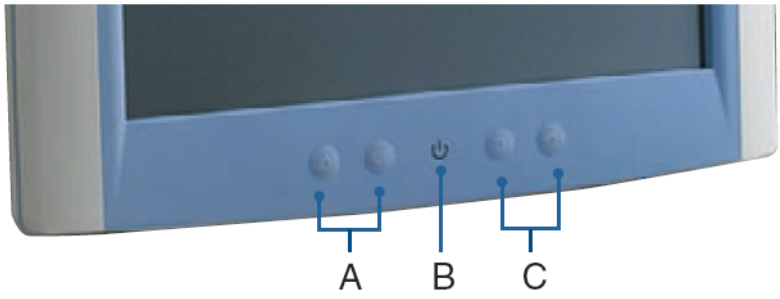
Sections include:

- A Quick Tour of the POC-176
- Installation Procedures
- Running the BIOS Setup Program
- Installing System Software
- Installing the Drivers

2.1 A Quick Tour of the POC-176

Before you start to set up the POC-176, take a moment to become familiar with the locations and purposes of the controls, drives, connections and ports, which are illustrated in the figures below.

When you place the POC-176 upright on the desktop, its front panel appears as shown in Figure 2.1.



A. Audio Control Button
B. Power Light
C. Brightness Control Button

Figure 2.1 Front View of the Point-of-care Terminal

When you turn the Point of Care Terminal around and look at its rear cover, the sunken I/O section is at the bottom of the panel PC, as shown in Figure 2.2. (The I/O section includes various I/O ports, including serial ports, DVI port, the Ethernet port, USB ports, the DC power adapter jack, and so on.)

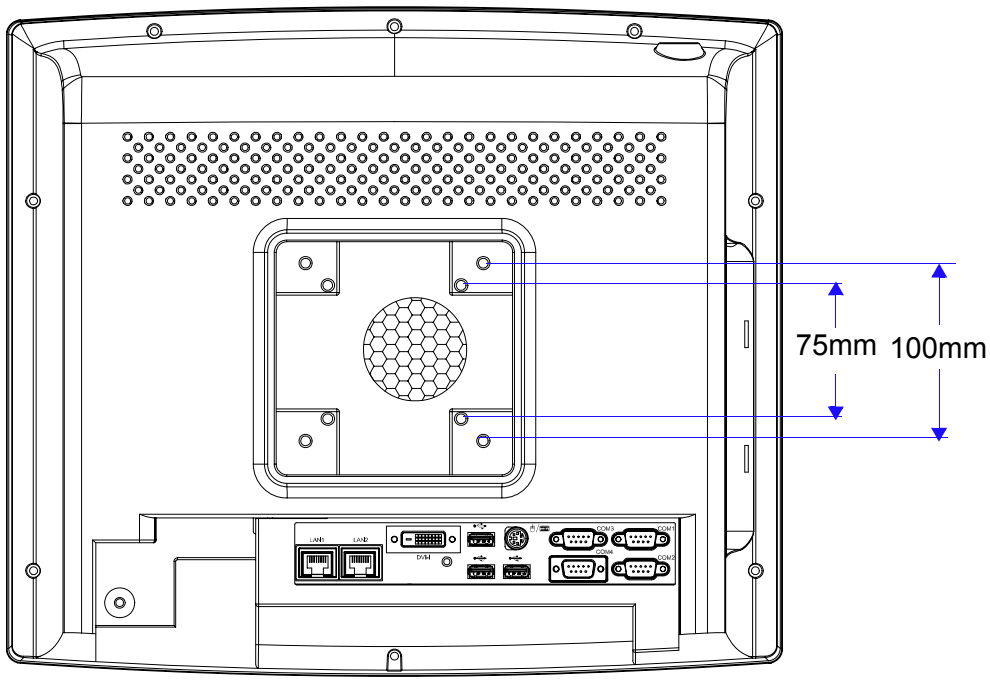


Figure 2.2 Rear View of the Point of Care Terminal

The I/O section includes various I/O ports, including serial ports, DVI port, the Ethernet ports, USB ports and so on. Ethernet & RS-232 I/O Connectivity with special port isolation design.

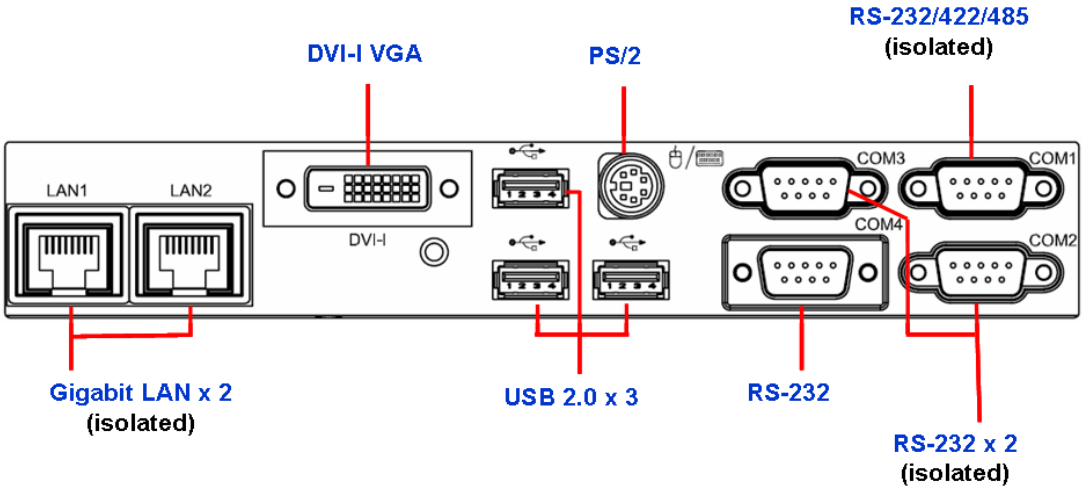


Figure 2.3 Rear View: Point of Care Terminal with I/O ports

When you turn the Point of Care Terminal around and look at its left side and remove the side cover, the sunken I/O section is at the left of the panel PC, as shown in Figure 2.3.

The I/O section includes various I/O ports, including a 1394b port, USB port, Smart card reader and optical device.

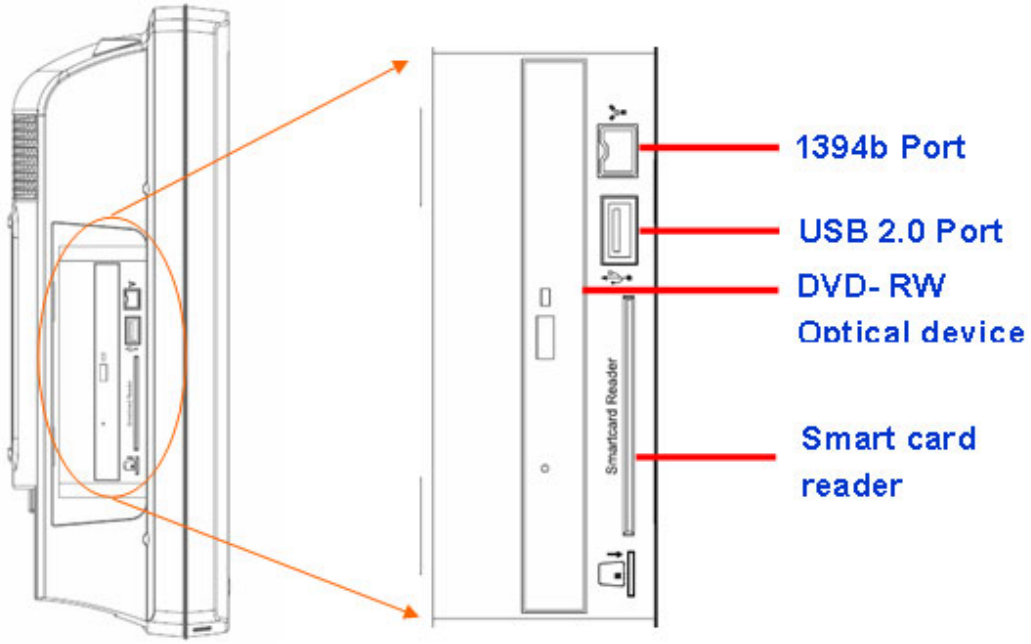


Figure 2.4 Side View: Point of Care Terminal with I/O Ports

2.2 Installation Procedures

2.2.1 Connecting the Power Cord

The POC-176 is powered only by an AC power cord. Always handle the power cords by the plug ends only.

Follow these procedures in order:

1. Connect the female end of the power cord to the AC Power inlet of the POC-176.
2. Connect the 3-pin male plug of the power cord to an electrical outlet. (See Figure 2.5)

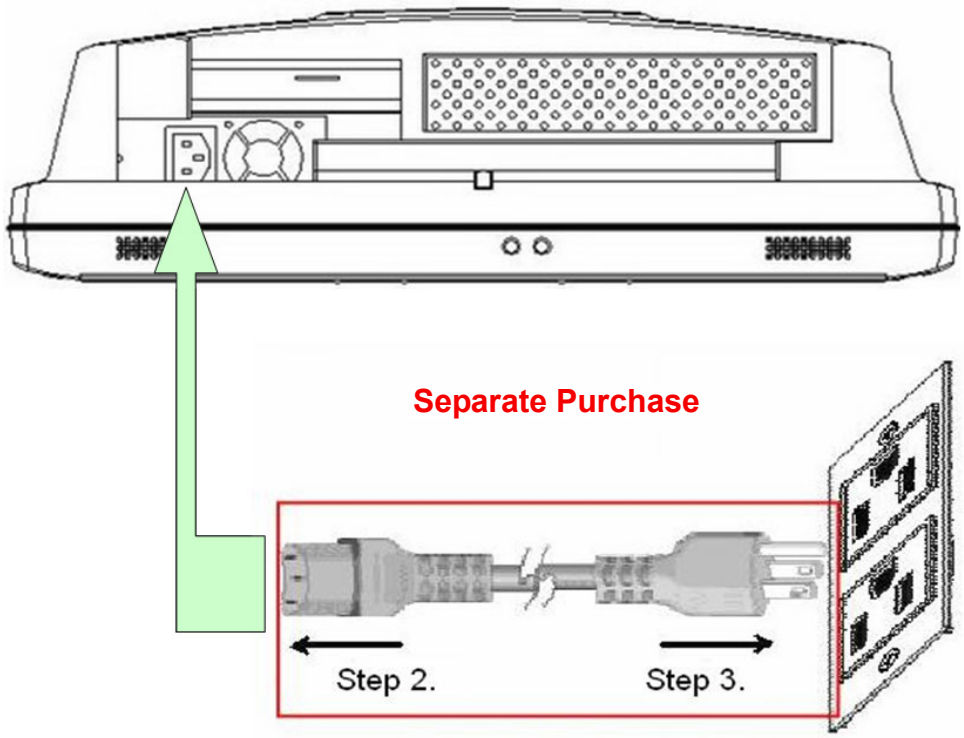


Figure 2.5 Connecting the Power Cord

2.2.2 Switch on the Power

Switch on the reset switch on the front cover. (See Figure 2.6.)

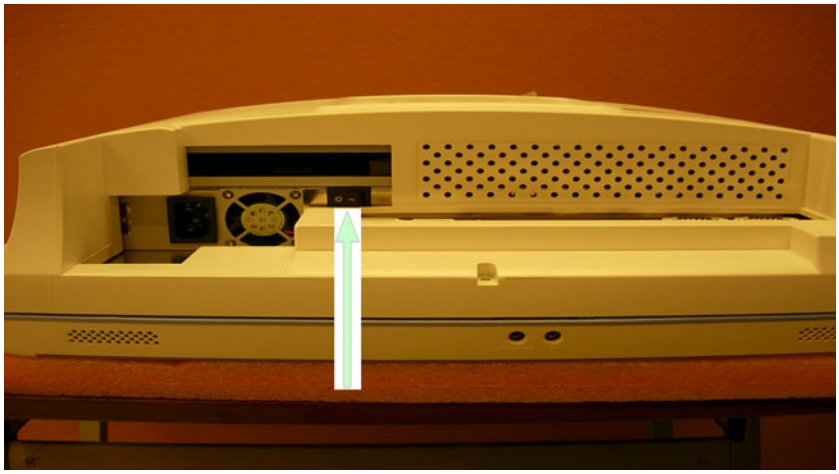


Figure 2.6 Press the Power Button to Boot System

2.3 Running the BIOS Setup Program

Your POC-176 has been set up and configured by your dealer prior to delivery. You may still find it necessary to use the BIOS (Basic Input-Output System) setup program to change system configuration information, such as the current date and time or your type of hard drive. The setup program is stored in read-only memory. It can be accessed either when you turn on or reset the panel PC, by pressing the " Crtl+Alt+Del " key on your keyboard immediately after powering on the computer.

The settings you specify with the setup program are recorded in a special area of memory called CMOS RAM. This memory is backed up by a battery so that it will not be erased when you turn off or reset the system. Whenever you turn on the power, the system reads the settings stored in CMOS RAM and compares them to the equipment check conducted during the power on self-test (POST). If an error occurs, an error message will be displayed on screen, and you will be prompted to run the setup program.

2.4 Installing System Software

Recent releases of operating systems from major vendors include setup programs which load automatically and guide you through hard disk preparation and operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the panel PC hard drive.

Note! *Some distributors and system integrators may have already pre-installed system software prior to shipment of your panel PC.*

If required, insert your operating system's installation or setup diskette into the external diskette drive until the release button pops up.

The BIOS supports system boots up directly from the CD-ROM drive. You may also insert your system installation CD-ROM disk into your external CD-ROM drive.

Power on or reset the system by pressing the "Ctrl+Alt+Del" keys simultaneously. The Point of Care terminal will automatically load the operating system from the diskette or CD-ROM.

If you are presented with the opening screen of a setup or installation program, follow the instructions on screen. The setup program will guide you through preparation of your hard drive, and installation of the operating system.

2.5 Installing the Drivers

After installing your system software, you will be able to set up the chipset, graphics, Ethernet, audio and touchscreen functions from your own external CD-ROM drive. All the drivers except the CD-ROM driver are stored on a CD-ROM disc entitled "Drivers and Utilities."

The standard procedures for installing the chipset, graphics, audio and Ethernet drivers are described in Chapters 3, 4, 5, and 6 respectively.

The various drivers and utilities in the CD-ROM disc have their own text files which help users install the drivers and understand their functions. These files are a very useful supplement to the information in this manual.

For your reference, the directory of drivers on the "Drivers and Utilities" CD-ROM is:

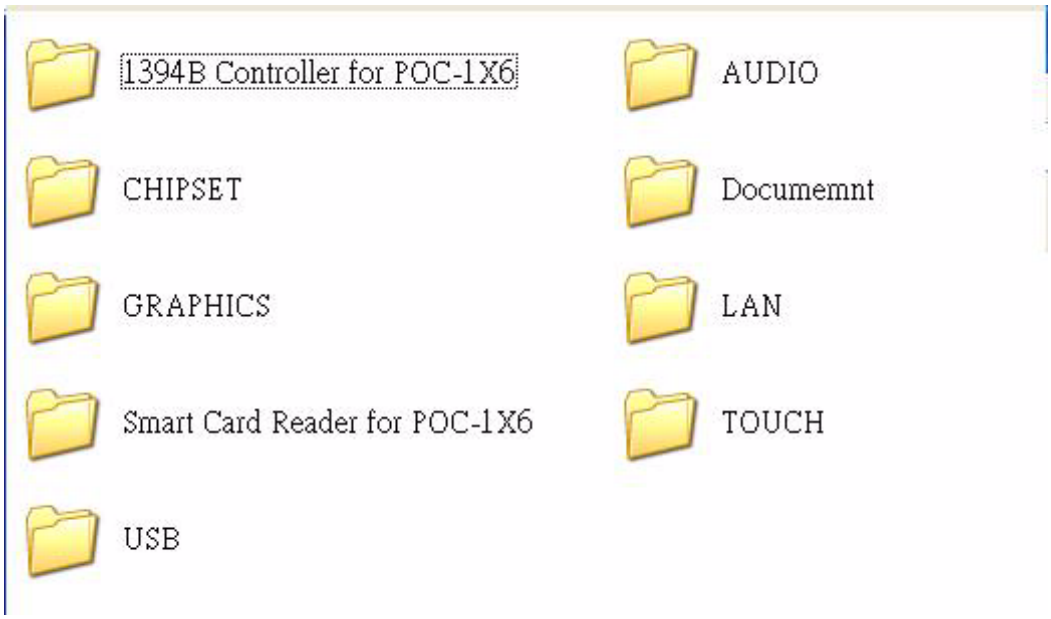


Figure 2.7 CD-ROM File Directory: "Drivers and Utilities"

Note! *The drivers and utilities used for the POC-176 panel PCs are subject to change without notice. If in doubt, check Advantech's website or contact our application engineers for the latest information regarding drivers and utilities.*

Chapter 3

Chipset and Graphics Setup

Sections include:

- Introduction
- Installation of Chipset Driver

3.1 Introduction

The POC-176 has an onboard display interface. The specifications and features are described in the following section:

3.1.1 Chipset

The POC-176 uses a Mobile Intel® 945GME Express chipset for its graphic controller. It supports an SDVO device, and CRT monitors. The Mobile Intel® 945GM Express Chipsets are designed for use with Intel's next generation mobile platform: Intel® Centrino® Duo processor technology.

The Mobile Intel 945 Express Chipset Family come with the Generation 3.5 Intel Integrated Graphics Engine, and the Intel® Graphics Media Accelerator 950 (Intel® GMA 950), providing enhanced graphics support over the previous generation Graphics and Memory Controller Hubs (GMCH's).

3.1.2 Display Memory

Dynamic Video Memory Technology (DVMT) 3.0 dynamically allocates up to 128 MB of system memory for graphics usage.

3.1.3 DVI Transmitter

The POC-176 uses Chrontel CH7307C for driving its DVI Ports. The CH7307C is a Display Controller device, which accepts a digital graphics input signal, encodes and transmits data through a DVI link (DFP is also supported). The device accepts one channel of RGB data over three pairs of serial data ports.

The DVI processor includes a low jitter PLL for generation of the high frequency serialized clock, and all circuitry required to encode, serialize and transmit the data. The CH7307C is able to drive a DVI display at a pixel rate of up to 165 MHz, supporting UXGA (1600 x 1200) resolution displays.

3.1.4 Display Types

POC-176 supports a single DVI-I jack for a single monitor.

The DVI-I jack supports both a DVI Digital I/F and CRT RGB signal.

An analog CRT DAC interface supports a max DAC frequency up to 400 MHz, 24-bit RAMDAC, is DDC2B compliant, and a resolution up to QXGA 2048 x 1536.

3.2 Installation of Chipset Driver

Complete the following steps to install the chipset driver. Follow the procedures in the flow chart that apply to the operating system that you are using within your POC-176.

Important! *The following Windows illustrations are examples only. You must follow the flow chart instructions and pay attention to the instructions which appear on your screen.*

Note! *The CD-ROM drive is designated as "D" throughout this chapter.*

Note! *<Enter> means pressing the "Enter" key on the keyboard.*

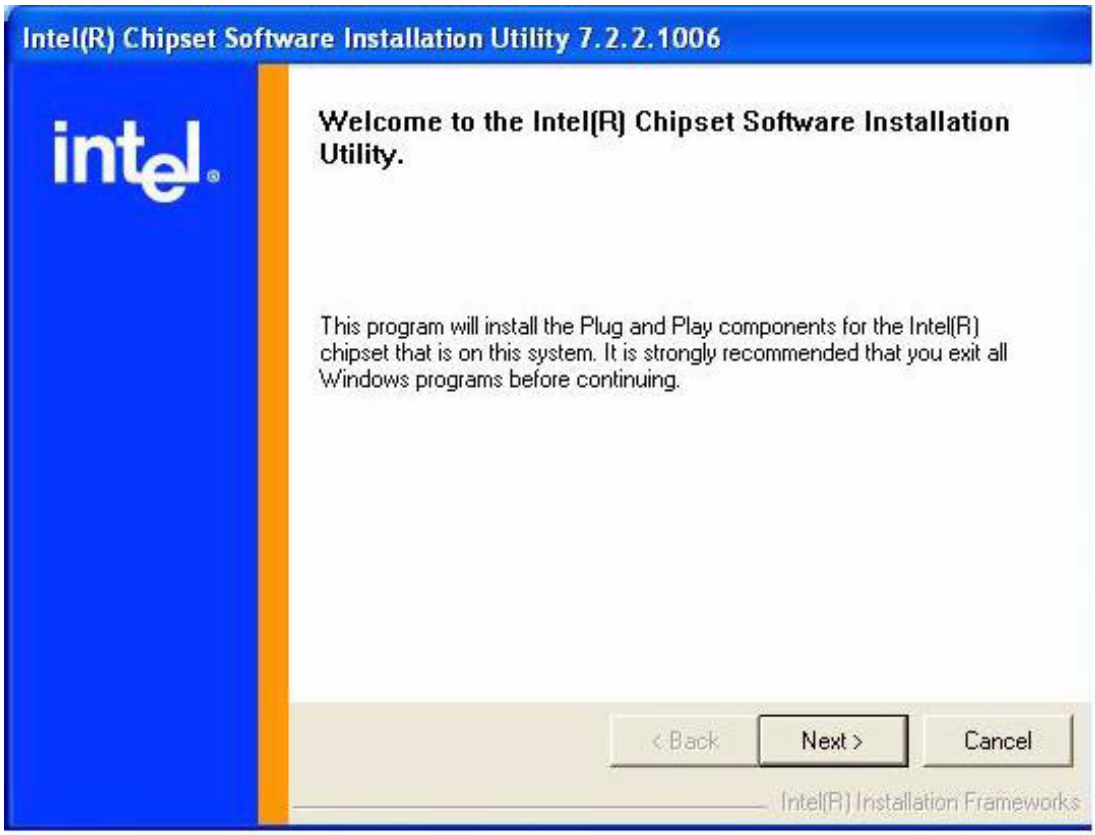
Note! *Before you install the graphics driver for the POC-176, please ensure you have installed the "Intel Chipset Software Installation Utility". You can find this driver on the Utility CD-ROM.*

Note! *The resolution of the Window's display will be fixed at 640 x 480 before you install the graphics driver. Depending on your monitor's native resolution, the black area might be different.*

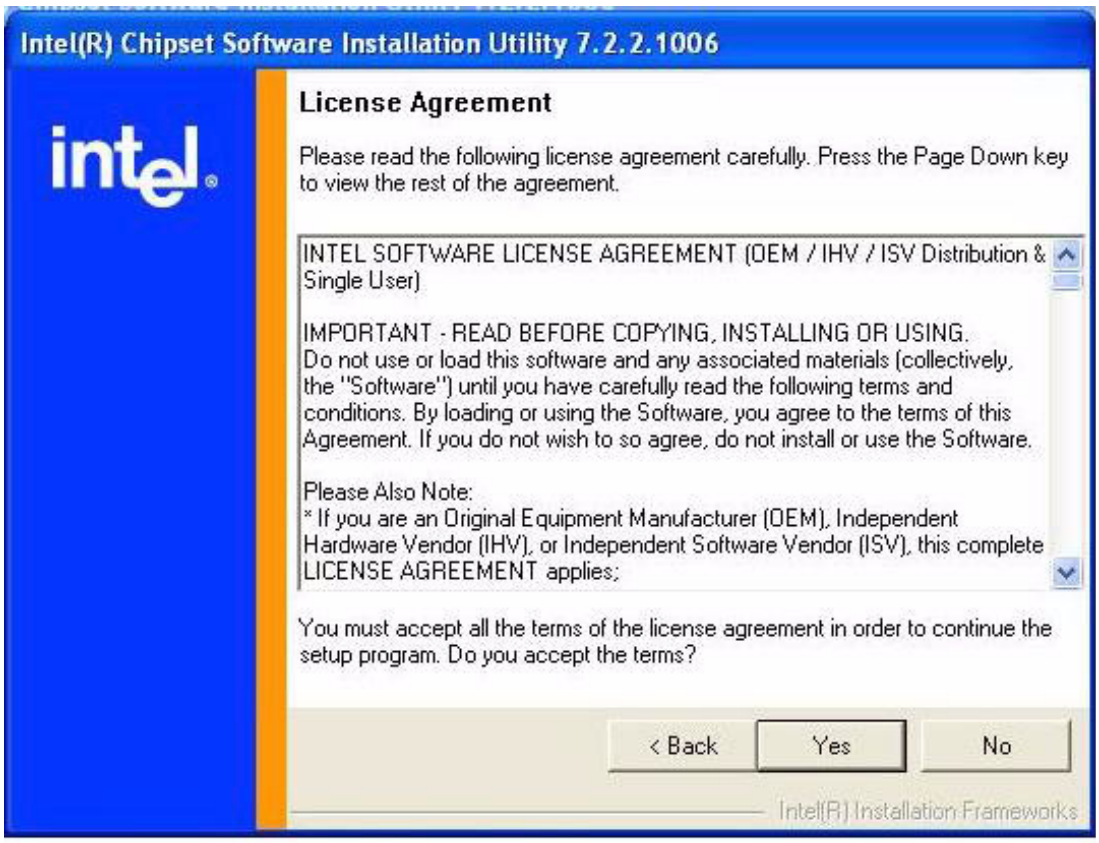
3.2.1 Installation for Windows XP

Step 1-1: Double Click “setup.exe” in D:\Chipset folder. The install dialog will appear.

Step 1-2: Click 'Next' to continue.


Intel(R) Chipset Software Installation Utility 7.2.2.1006
intel
Welcome to the Intel(R) Chipset Software Installation Utility.
This program will install the Plug and Play components for the Intel(R) chipset that is on this system. It is strongly recommended that you exit all Windows programs before continuing.
< Back
Next >
Cancel
Intel(R) Installation Frameworks

Step 1-3: Read the License Agreement and click “Yes” to proceed.


Intel(R) Chipset Software Installation Utility 7.2.2.1006
intel
License Agreement
Please read the following license agreement carefully. Press the Page Down key to view the rest of the agreement.
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
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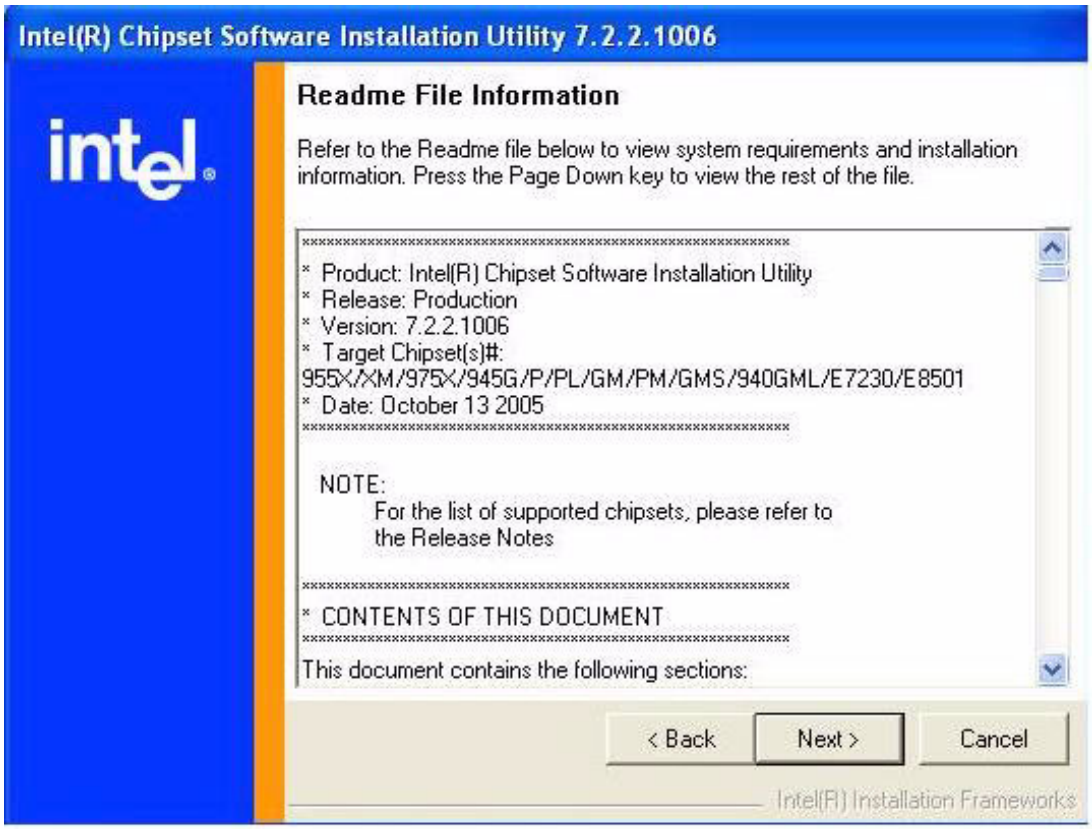
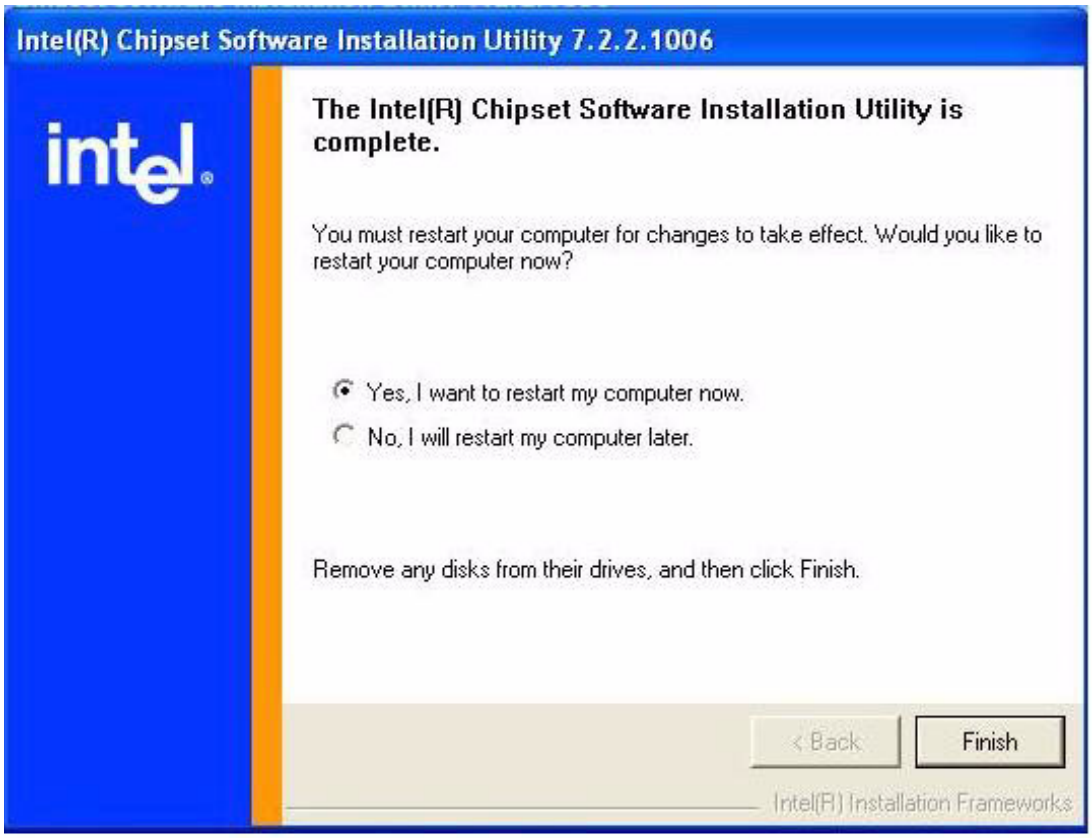
You must accept all the terms of the license agreement in order to continue the setup program. Do you accept the terms?
< Back
Yes
No
Intel(R) Installation Frameworks

Step 1-4: Read the file information screen and click “Next” to proceed.


Intel(R) Chipset Software Installation Utility 7.2.2.1006
intel
Readme File Information
Refer to the Readme file below to view system requirements and installation information. Press the Page Down key to view the rest of the file.
* Product: Intel(R) Chipset Software Installation Utility
* Release: Production
* Version: 7.2.2.1006
* Target Chipset(s)#:
955X/XM/975X/945G/P/PL/GM/PM/GMS/940GML/E7230/E8501
* Date: October 13 2005
NOTE:
For the list of supported chipsets, please refer to the Release Notes
* CONTENTS OF THIS DOCUMENT
This document contains the following sections:
< Back
Next >
Cancel
Intel(R) Installation Frameworks

Step 1-5: When the 'Setup COMPLETE' message appears click 'Finish' to restart your computer.

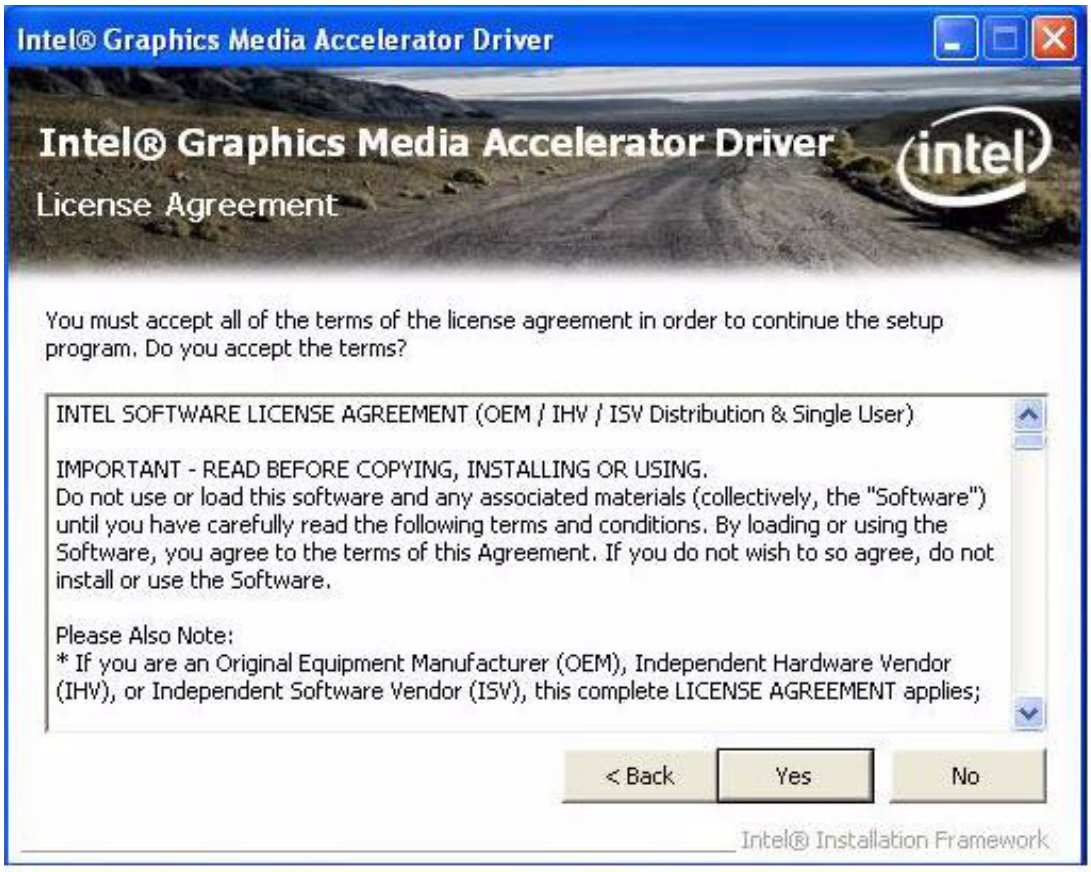

Intel(R) Chipset Software Installation Utility 7.2.2.1006
intel
The Intel(R) Chipset Software Installation Utility is complete.
You must restart your computer for changes to take effect. Would you like to restart your computer now?
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish.
< Back
Finish
Intel(R) Installation Frameworks

Step 2-1: Double Click “setup.exe” in D:\Driver\GRAPHICS folder. The Install dialog will appear.

Step 2-2. Click 'Next' to continue.

Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
intel
Welcome to the Setup Program
This setup program will install the Intel® Graphics Media Accelerator Driver onto this computer. It is strongly recommended that you exit all programs before continuing. Click Next to continue.
< Back
Next >
Cancel
Intel® Installation Framework

Step 2-3. Read the License Agreement and click “Yes” to proceed.


Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
License Agreement
intel
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
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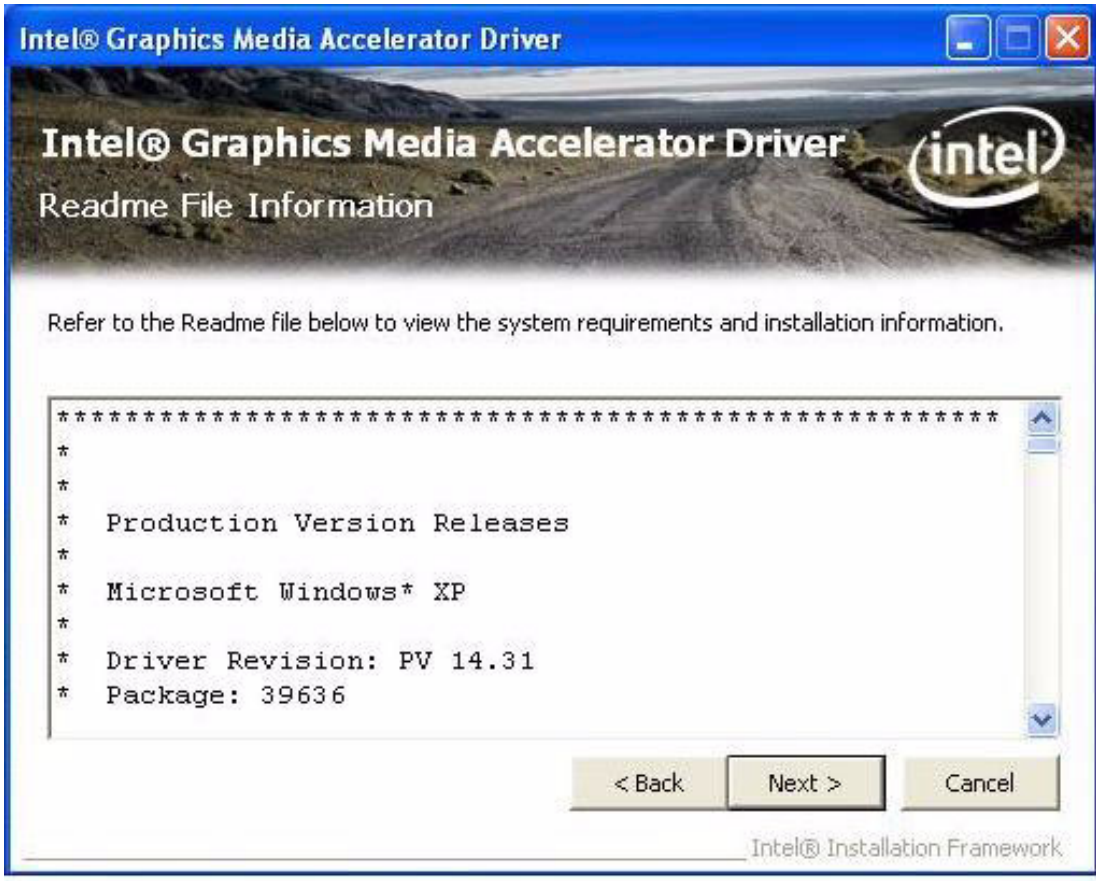
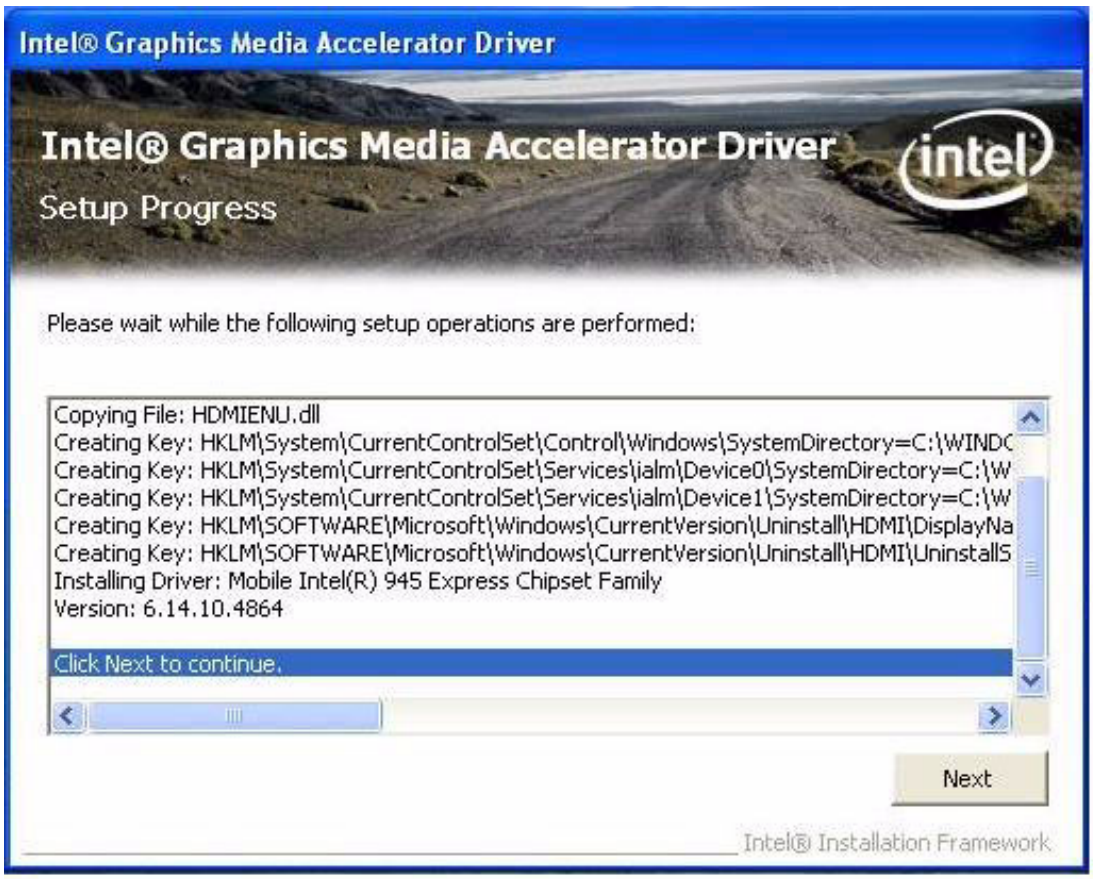
< Back
Yes
No
Intel® Installation Framework

Step 2-4. Read the file information screen and click “Next” to proceed.



Step 2-5. When the 'Click Next to continue' message appears click 'Next' to proceed.



Step 2-6. When the 'Setup Is Complete' message appears click 'Finish' to restart your computer.

Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Setup Is Complete
intel
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart this computer now.
No, I will restart this computer later.
Click Finish, then remove any installation media from the drives.
Finish
Intel® Installation Framework

Chapter 4

Audio Interface

Sections include:

- Introduction
- Installation of Audio Driver
- Further Information

4.1 Introduction

The POC-176's onboard audio interface provides high-quality stereo sound by using the ALC888 audio controller from Realtek. The ALC888 series are high performance 7.1+2 channel high definition audio codecs providing ten DAC channels that simultaneously support 7.1 sound playback, plus 2 channels of independent stereo sound output (multiple streaming) through the front panel stereo outputs.

All analog jacks are input and output capable, and headphone amplifiers are also integrated at each analog output. All analog I/Os can be re-tasked according to user's definitions, or automatically switched depending on the connected device type.

4.2 Installation of Audio Driver

Before installing the audio driver, please take note of the procedures detailed below. You must know which operating system you are using on your POC-176, and then refer to the corresponding installation flow chart, following the steps. You can quickly and successfully complete the installation, even if you are not familiar with instructions for Windows.

This setup program will install the audio driver and Realtek utility on your system.

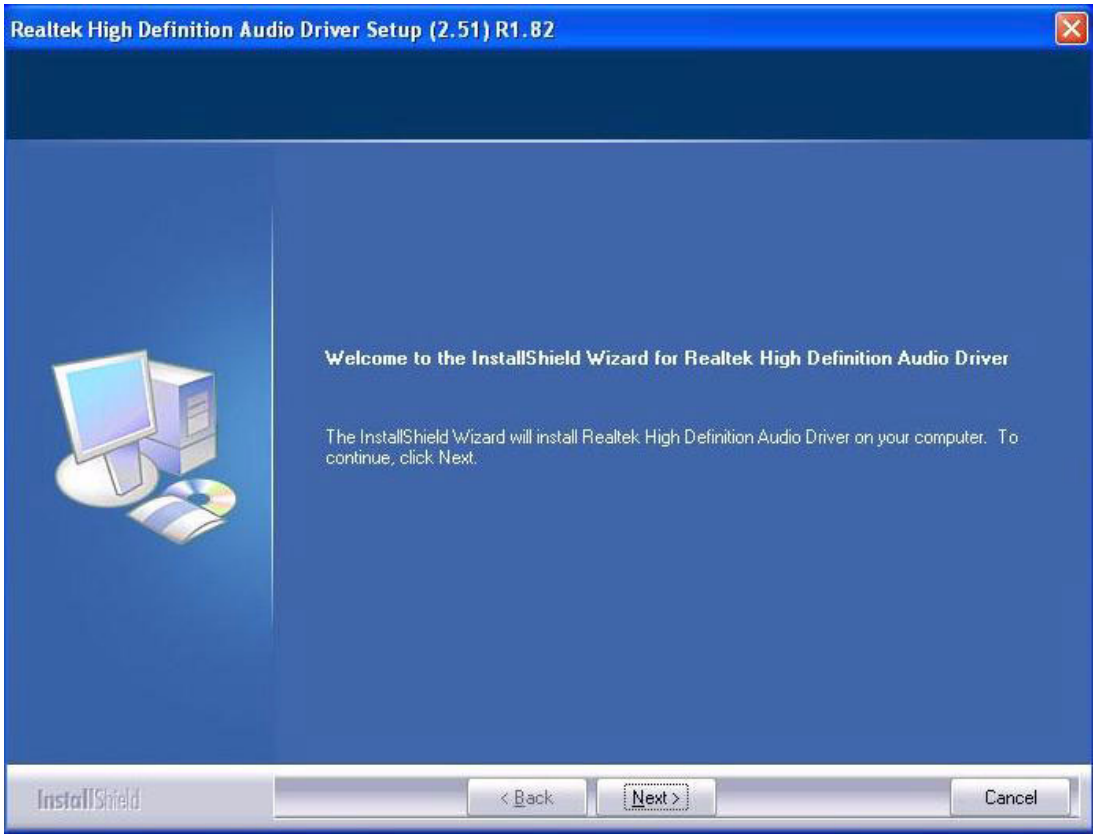
Important! *The following Windows illustrations are examples only. You must follow the flow chart instructions and pay attention to the instructions which appear on your screen.*

Note! *The CD-ROM drive is designated as "D" throughout this chapter.*

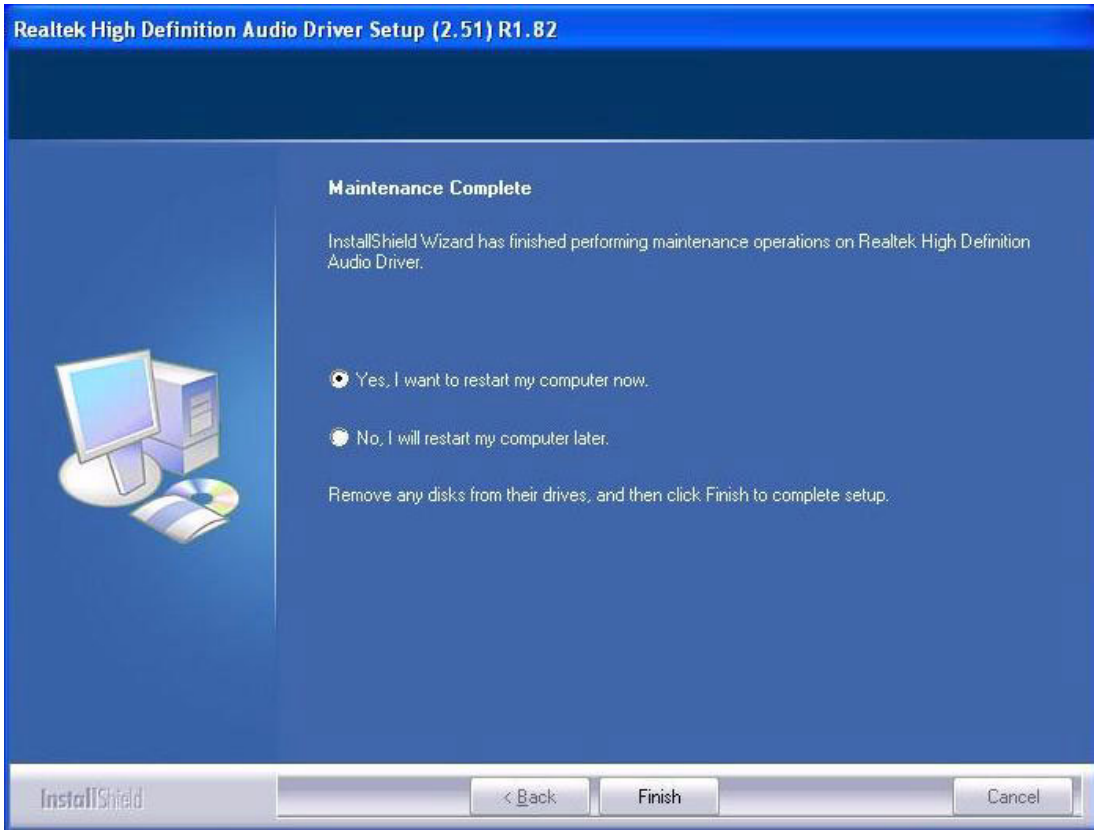
Note! *<Enter> means pressing the "Enter" key on the keyboard.*

4.2.1 Installation for Windows 2000/XP

1. Double Click “setup.exe” in D:\AUDIO folder. The Install dialog will appear.
2. Click “Next” to continue.
   The install program will install the driver and utility. It will spend a period of time processing.


Realtek High Definition Audio Driver Setup (2.51) R1.82
Welcome to the InstallShield Wizard for Realtek High Definition Audio Driver
The InstallShield Wizard will install Realtek High Definition Audio Driver on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

3. When the 'InstallShield Wizard Complete' message appears click 'Finish' to restart your computer.


Realtek High Definition Audio Driver Setup (2.51) R1.82
Maintenance Complete
InstallShield Wizard has finished performing maintenance operations on Realtek High Definition Audio Driver.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
InstallShield
< Back
Finish
Cancel

4.3 Further Information

For further information about the audio interface installation on your POC-176, including Driver updates, troubleshooting guides and FAQ lists, please visit the following web resources:

Realtek website: www.realtek.com.tw

Advantech websites:www.advantech.com

www.advantech.com.tw

Chapter 5

PCI Express Ethernet Interface

Sections include:

- Introduction
- Installation of Ethernet Driver
- Further Information

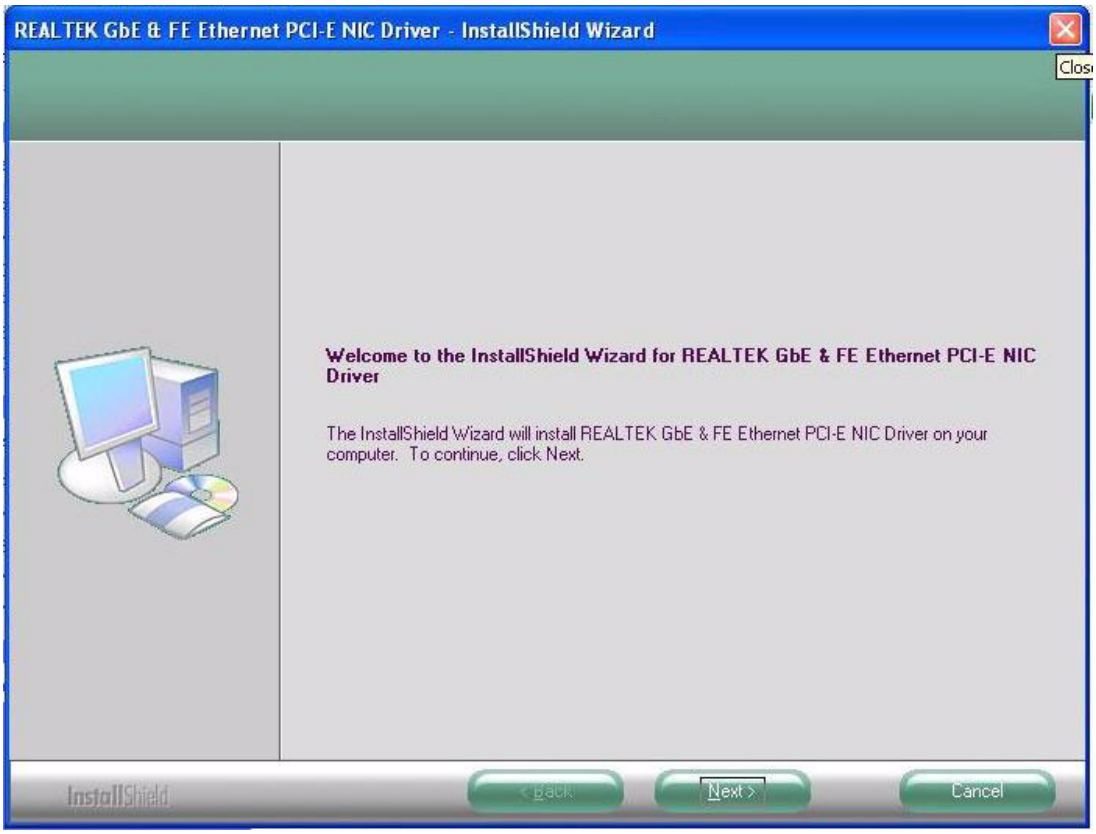
5.1 Introduction

The POC-176 is equipped with the high performance PCIe Ethernet chipset Realtek RTL8111B which is fully compliant with IEEE 802.3 10/100/1000 Mbps standards. The Ethernet port provides a standard RJ-45 jack.

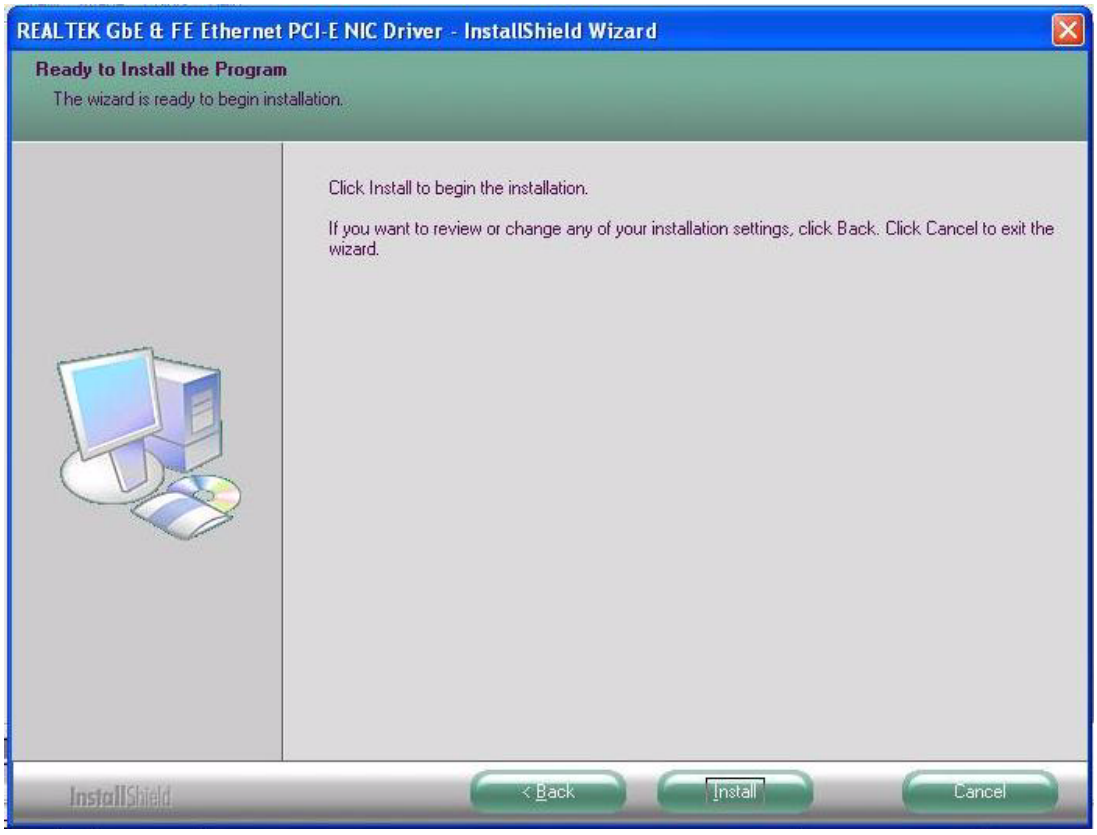
5.2 Installation of the Ethernet Driver

5.2.1 Installation for Windows XP

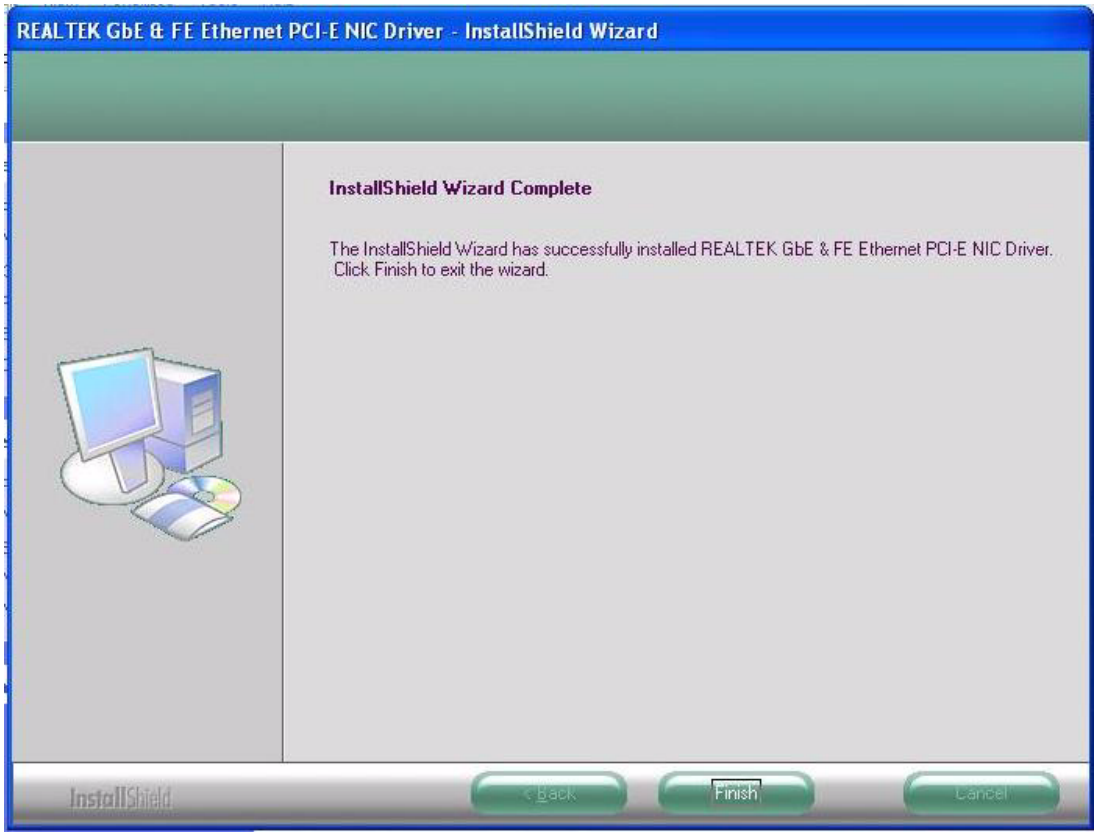
1. Double Click “Setup.exe” in D:\LAN folder. The Install dialog will appear.
2. Click “Next” to continue.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
Welcome to the InstallShield Wizard for REALTEK GbE & FE Ethernet PCI-E NIC Driver
The InstallShield Wizard will install REALTEK GbE & FE Ethernet PCI-E NIC Driver on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

3. Click “Install” to continue.
   The install program will install the driver. It will spend a period of time processing.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

4. When the ‘InstallShield Wizard Complete’ message appears click “Finish” to complete the install program.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed REALTEK GbE & FE Ethernet PCI-E NIC Driver. Click Finish to exit the wizard.
InstallShield
< Back
Finish
Cancel

5.3 Further Information

For further information about the installation in your POC-176, including driver updates, troubleshooting guides and FAQ lists, please visit the following web resources:

Realtek website: www.realtek.com.tw

Advantech websites:www.advantech.com

www.advantech.com.tw

Chapter 6

Touch Panel Interface

Sections include:

- Introduction
- Installation of Touch Panel Driver
- Further Information

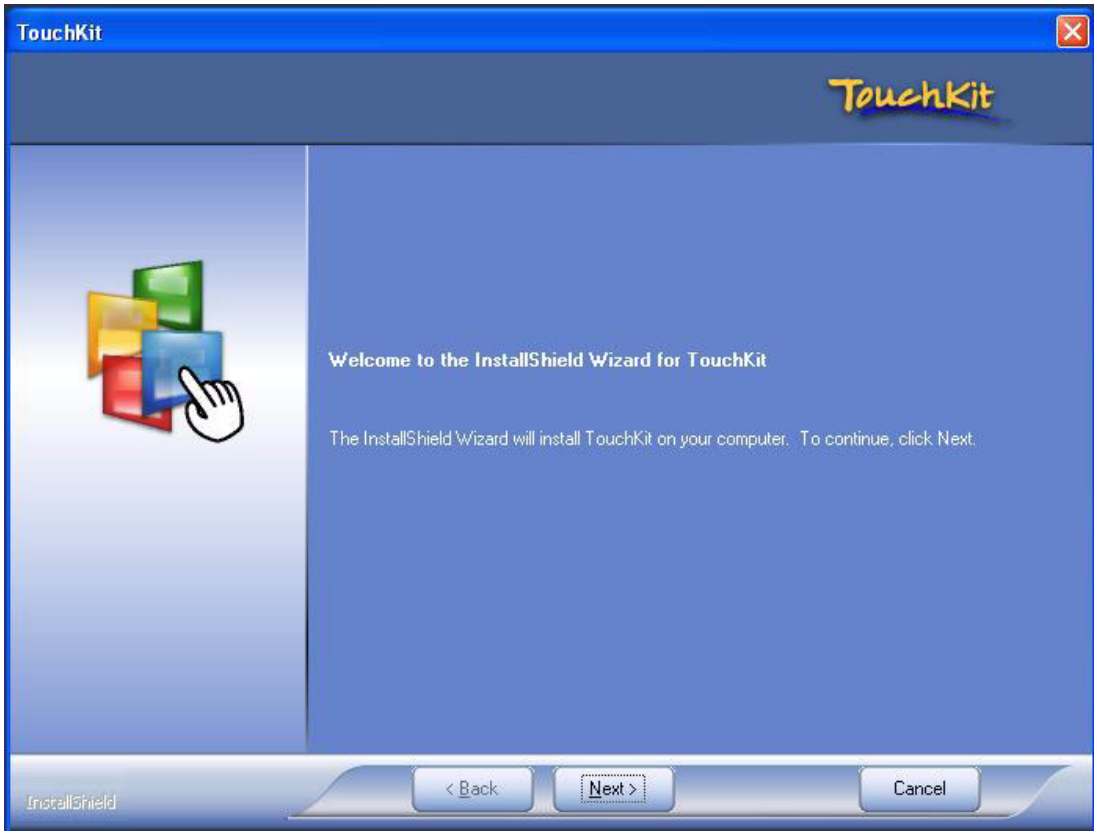
6.1 Introduction

The POC-176 is supported with a system integrated touch panel. The touch panel controller is controlled by the system COM5 interface.

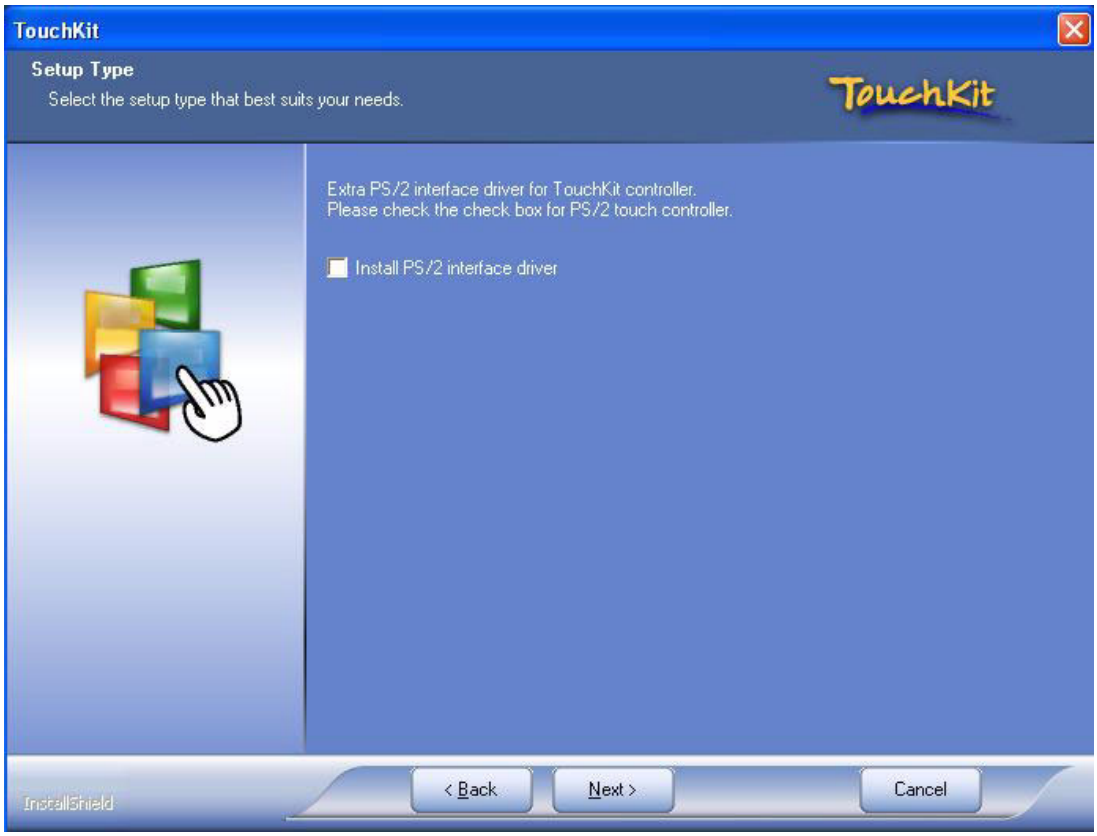
6.2 Installation of Touch Panel Driver

6.2.1 Installation for Windows XP

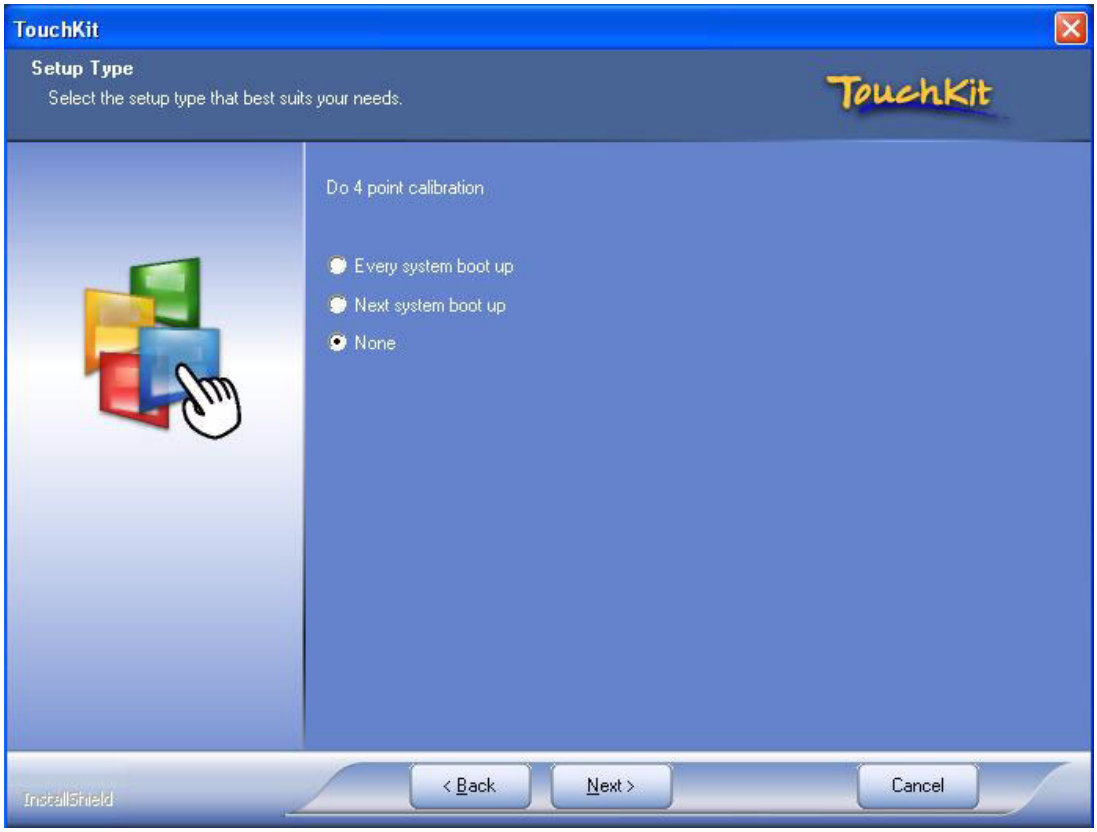
1. Double Click “setup.exe” in D:\TOUCH folder. The Install dialog will appear.
2. Click “Next” to continue.


TouchKit
TouchKit
Welcome to the InstallShield Wizard for TouchKit
The InstallShield Wizard will install TouchKit on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

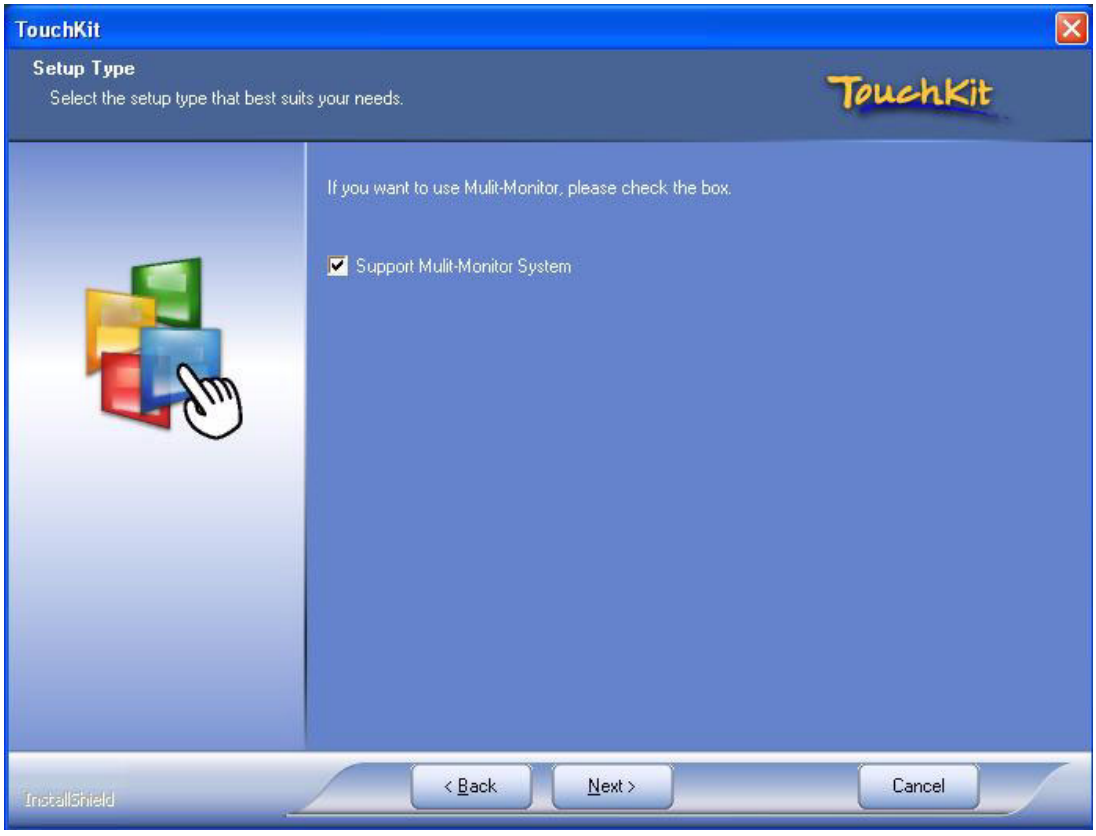
3. Click “Next” to continue.
   Because POC-176’s touch controller is controlled by COM5, please do not select the “Install PS/2 interface driver” checkbox.



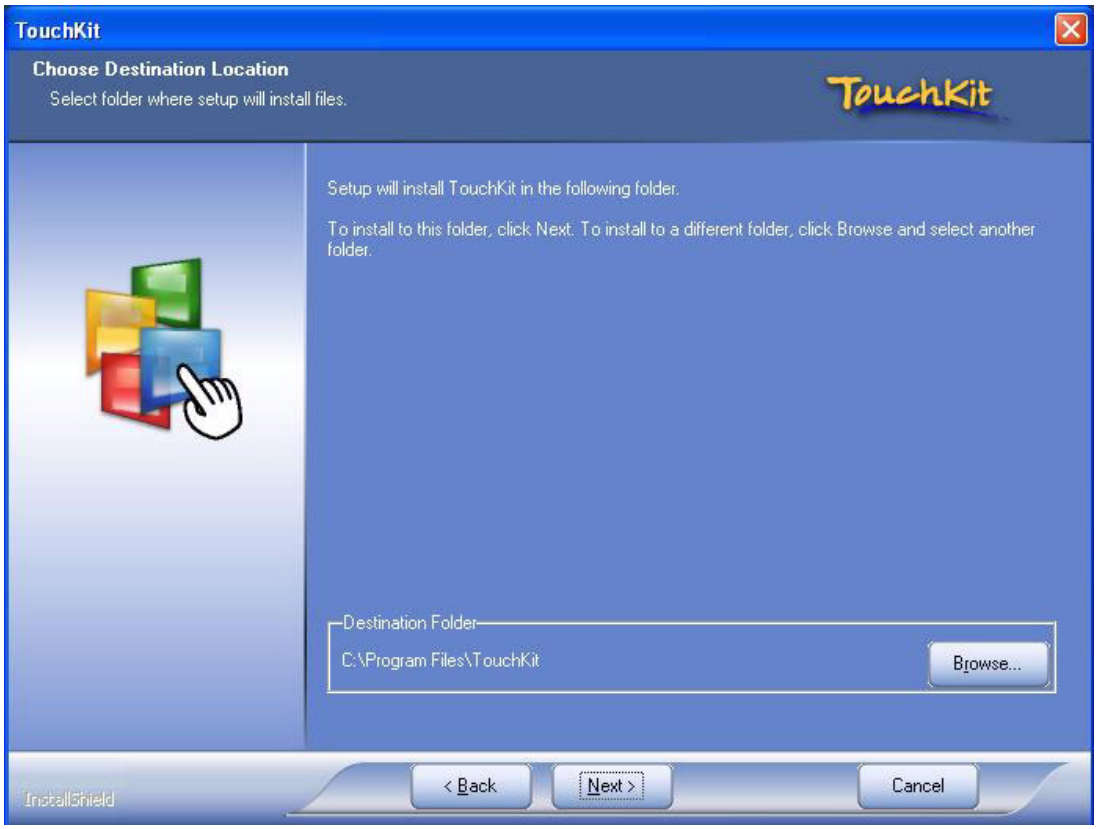
4. Click “Next” to continue.
Please select “None” for “Do 4 point calibration”. The driver install program will do this 4 point calibration when the install completes.



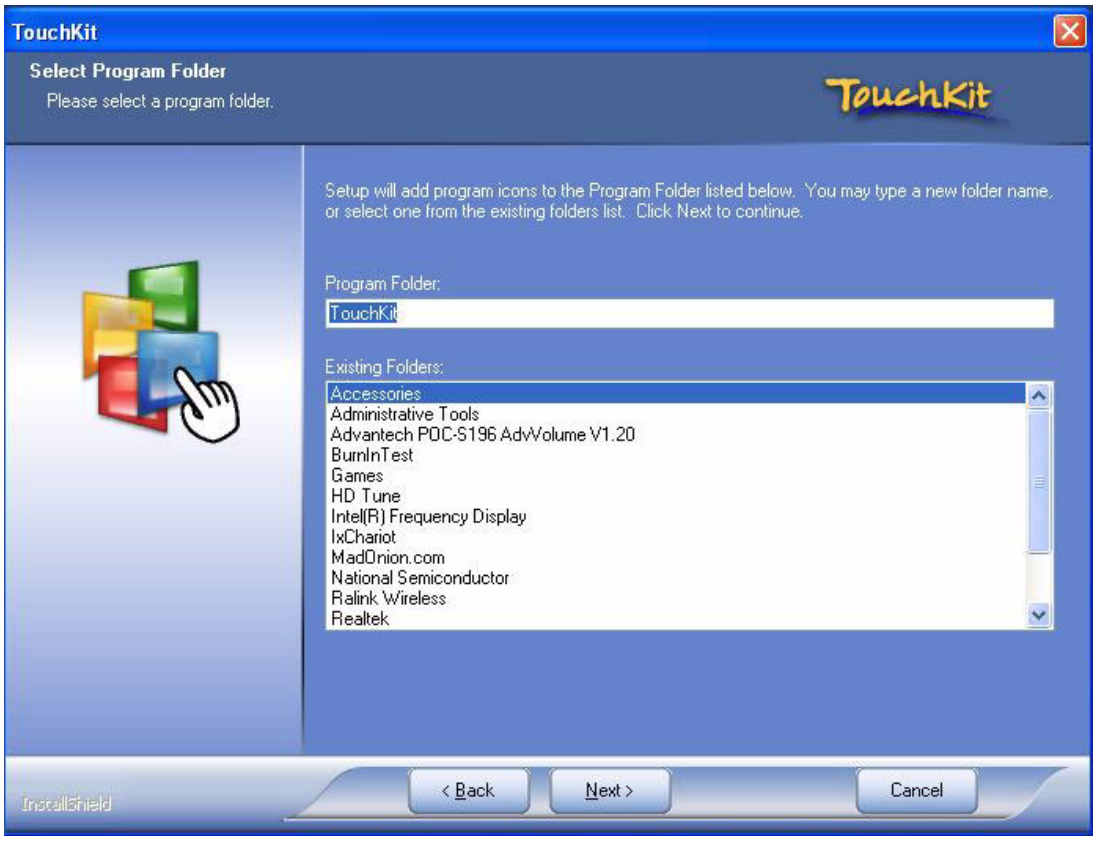
5. Click “Next” to continue. Please select “Support Multi-Monitor System”.



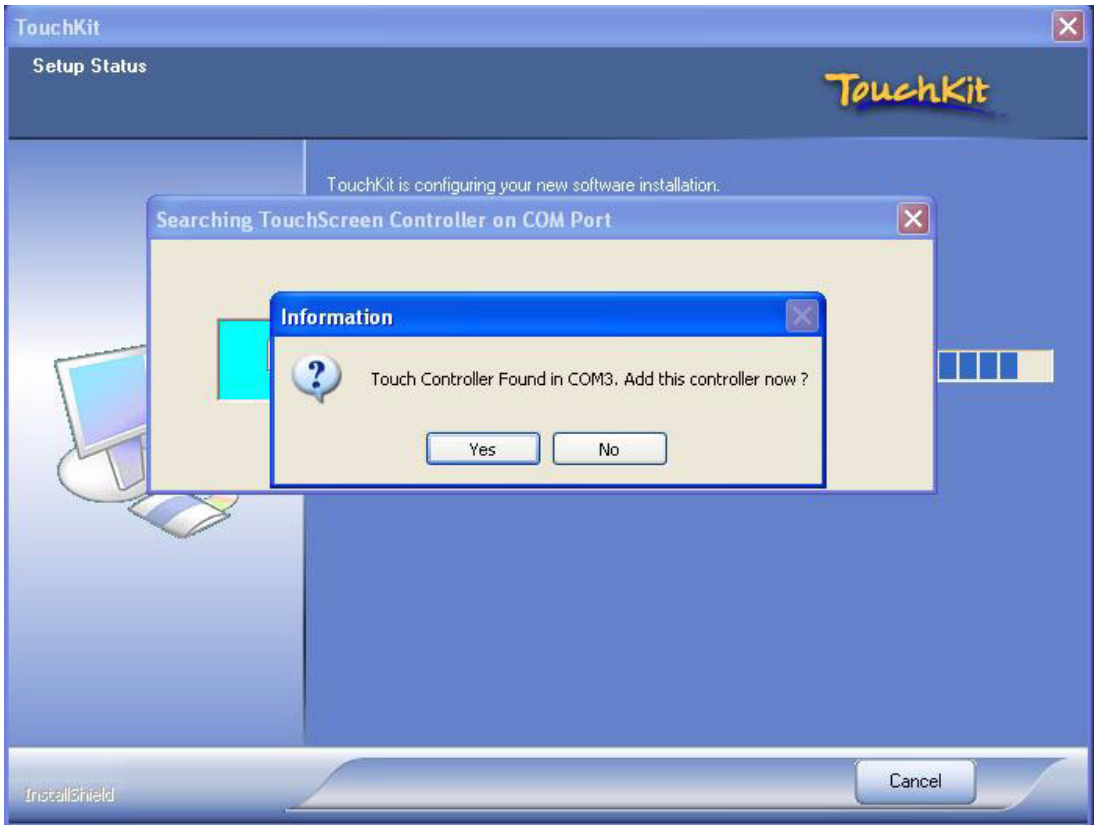
6. Click “Next” to continue.
   If you want to change the driver destination folder, you can click the “Browse” button to change the folder.


TouchKit
Choose Destination Location
Select folder where setup will install files.
TouchKit
Setup will install TouchKit in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\TouchKit
Browse...
InstallShield
< Back
Next >
Cancel

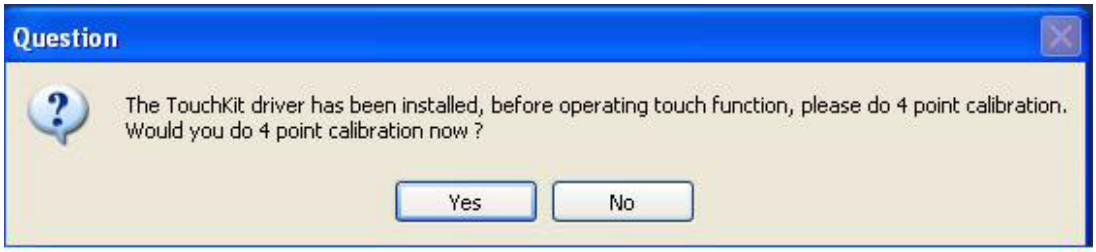
7. Click “Next” to continue.



8. Click “Yes” to continue.
The install program will search the touchscreen controller, and find it on COM5.



9. Click “Yes” to continue.
Please do 4 point calibration to calibrate the touchscreen.


Question
The TouchKit driver has been installed, before operating touch function, please do 4 point calibration.
Would you do 4 point calibration now ?
Yes
No

10. Touch 'X' once at each of the 4 corners on the panel.
    Please touch each “X” icon at the corners until the icon stops blinking.

6.3 Further Information

For further information about the installation in your POC-176, including Driver updates, troubleshooting guides and FAQ lists, please visit the following web resources:

Advantech websites:www.advantech.com

www.advantech.com.tw

Chapter 7

1394b Interface

Sections include:

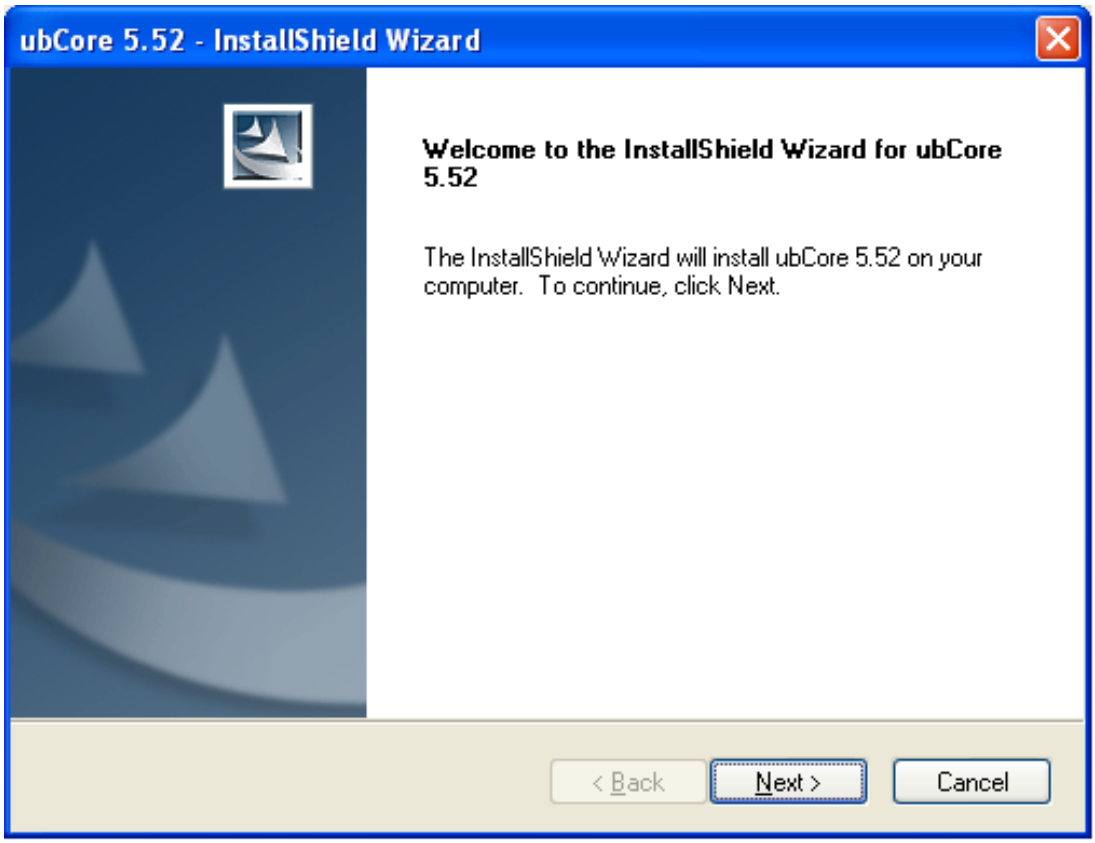
- Introduction
- Driver installation
- Further Information

7.1 Introduction

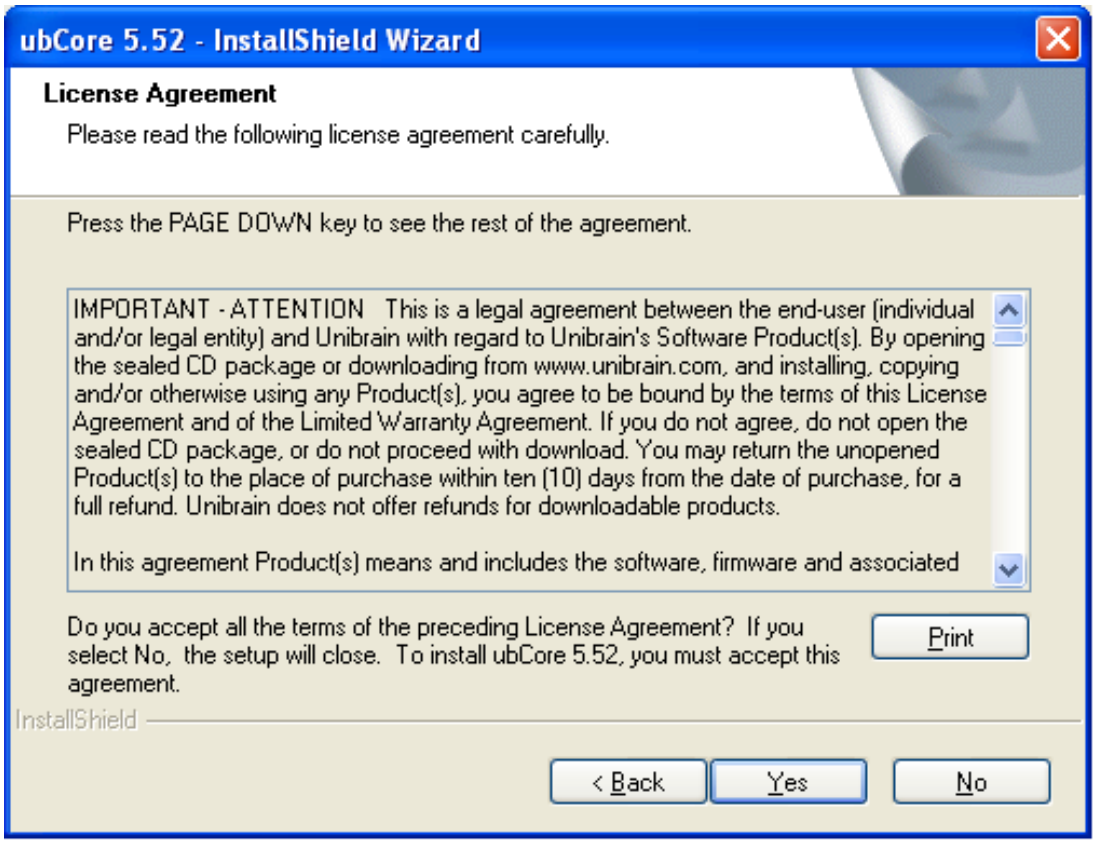
The POC-176 is supported with a system integrated high speed 1394b interface. The 1394b controller is controlled by the system PCI Express interface.

7.2 Driver Installation

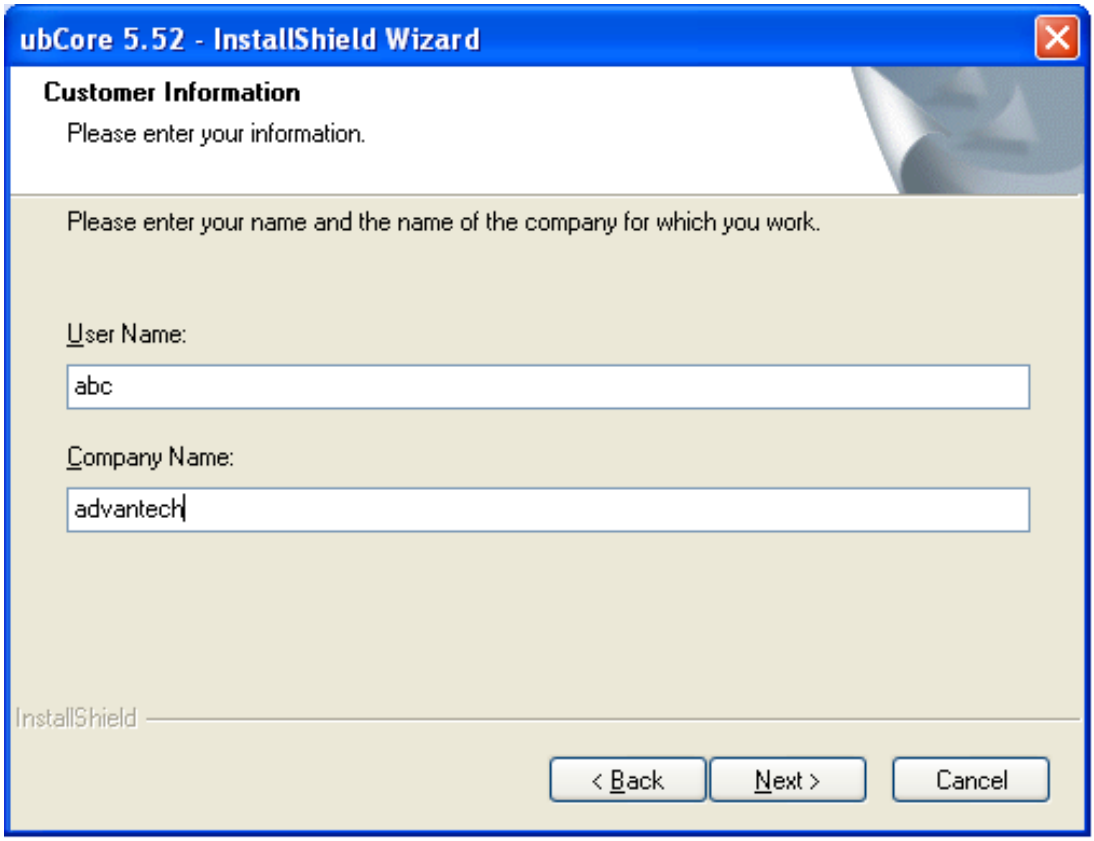
1. Double Click "ubCore32_080808.exe" in the D:\ 1394B Controller folder. The Install dialog will appear.
2. Click 'Next' to continue.


ubCore 5.52 - InstallShield Wizard
Welcome to the InstallShield Wizard for ubCore 5.52
The InstallShield Wizard will install ubCore 5.52 on your computer. To continue, click Next.
< Back
Next >
Cancel

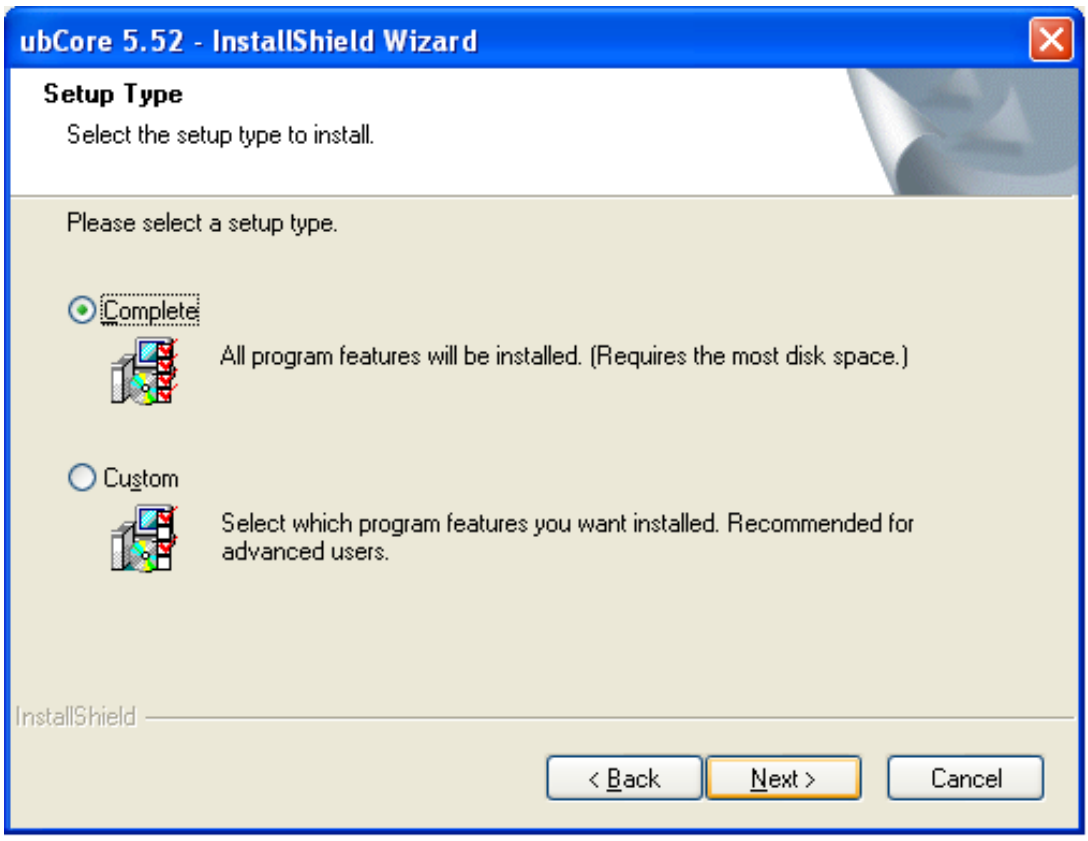
3. Click 'Yes' to continue.


ubCore 5.52 - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
IMPORTANT - ATTENTION This is a legal agreement between the end-user (individual and/or legal entity) and Unibrain with regard to Unibrain's Software Product(s). By opening the sealed CD package or downloading from www.unibrain.com, and installing, copying and/or otherwise using any Product(s), you agree to be bound by the terms of this License Agreement and of the Limited Warranty Agreement. If you do not agree, do not open the sealed CD package, or do not proceed with download. You may return the unopened Product(s) to the place of purchase within ten (10) days from the date of purchase, for a full refund. Unibrain does not offer refunds for downloadable products.
In this agreement Product(s) means and includes the software, firmware and associated
Do you accept all the terms of the preceding License Agreement? If you select No, the setup will close. To install ubCore 5.52, you must accept this agreement.
Print
InstallShield
< Back
Yes
No

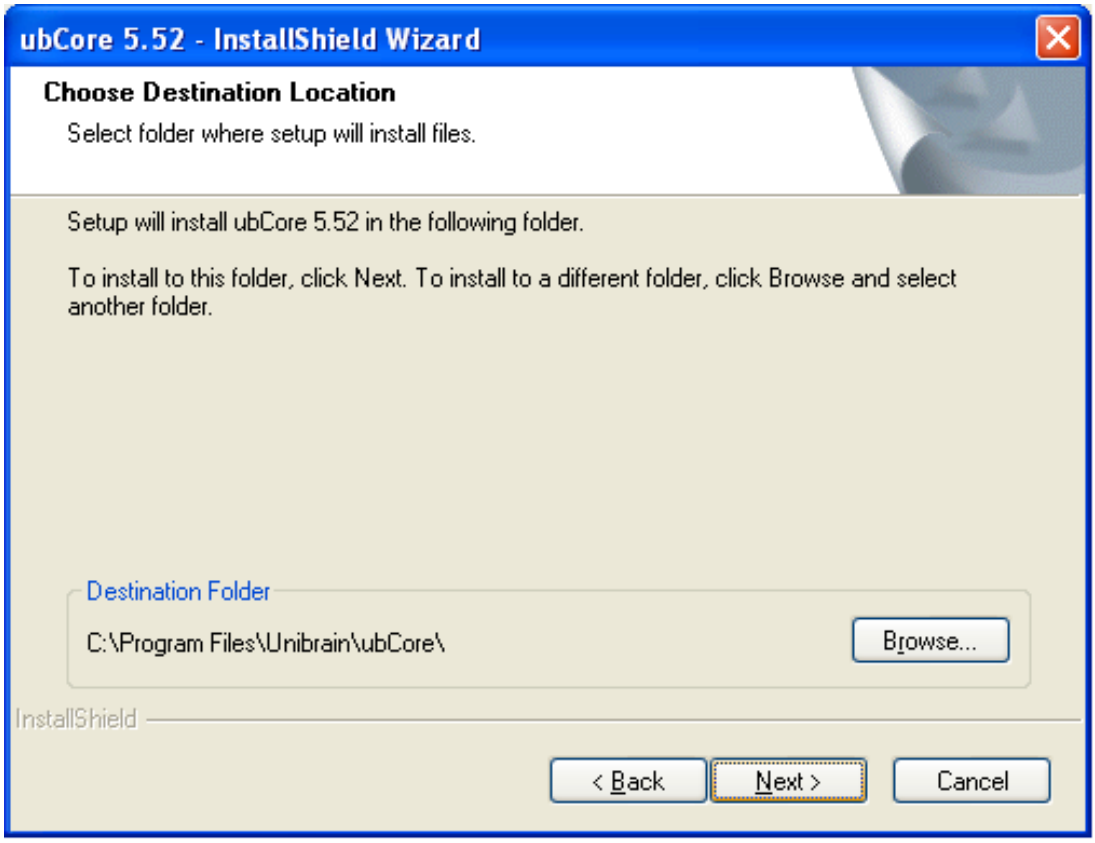
4. Please enter "User Name" and "Company Name" then click 'Next' to continue. (eg: "abc" and "Advantech")



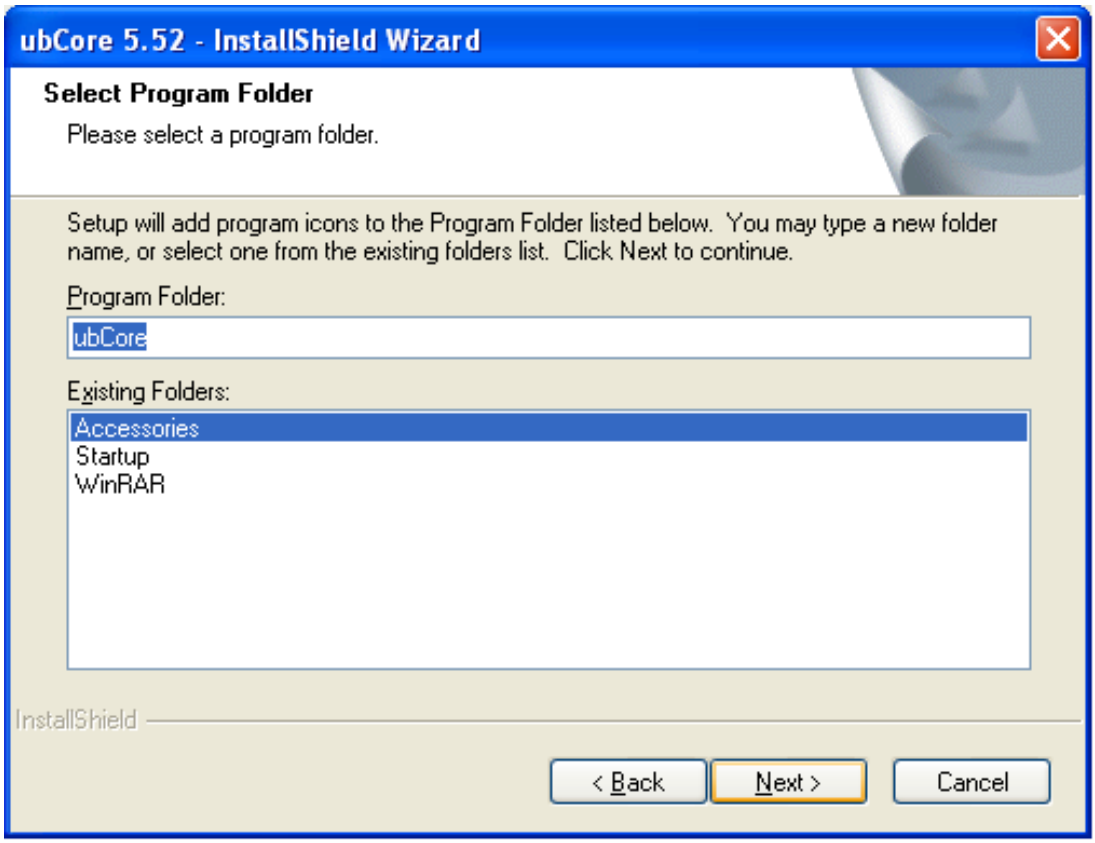
5. Select "Complete" then click 'Next' to continue.


ubCore 5.52 - InstallShield Wizard
Setup Type
Select the setup type to install.
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Select which program features you want installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

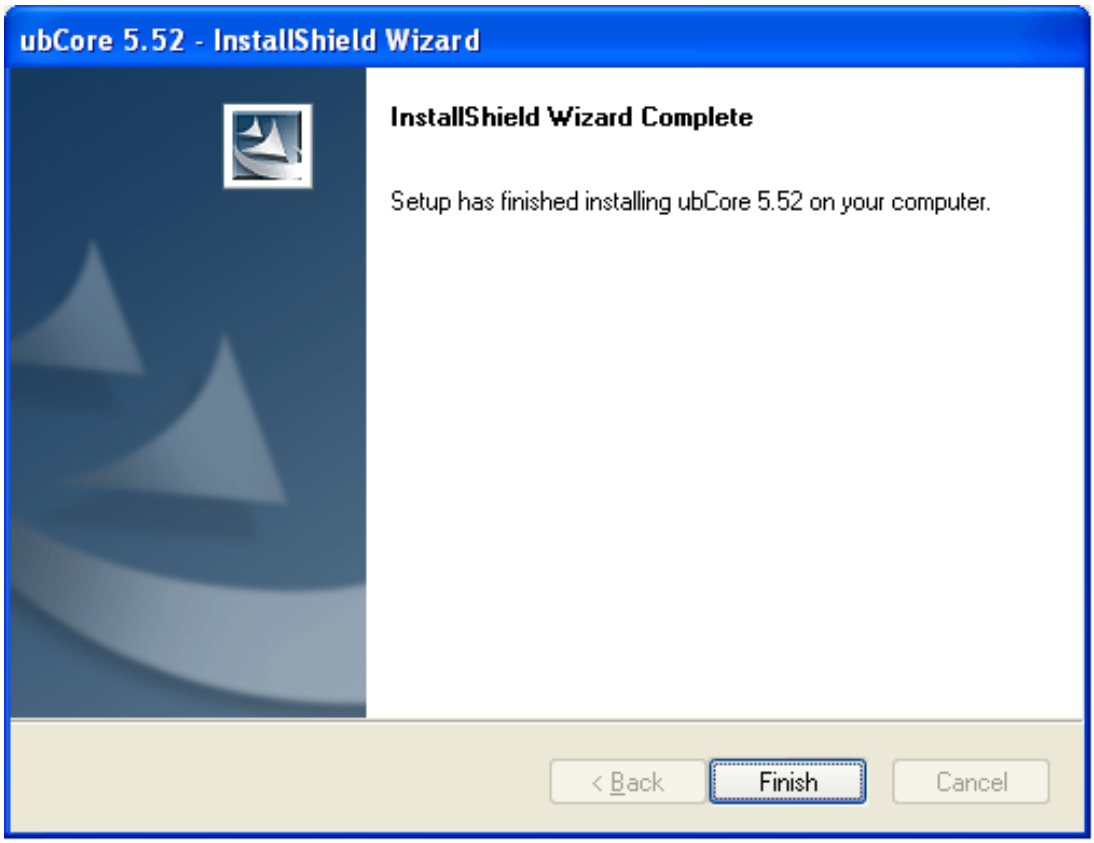
6. Click 'Next' to continue.


ubCore 5.52 - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
Setup will install ubCore 5.52 in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\Unibrain\ubCore\
Browse...
InstallShield
< Back
Next >
Cancel

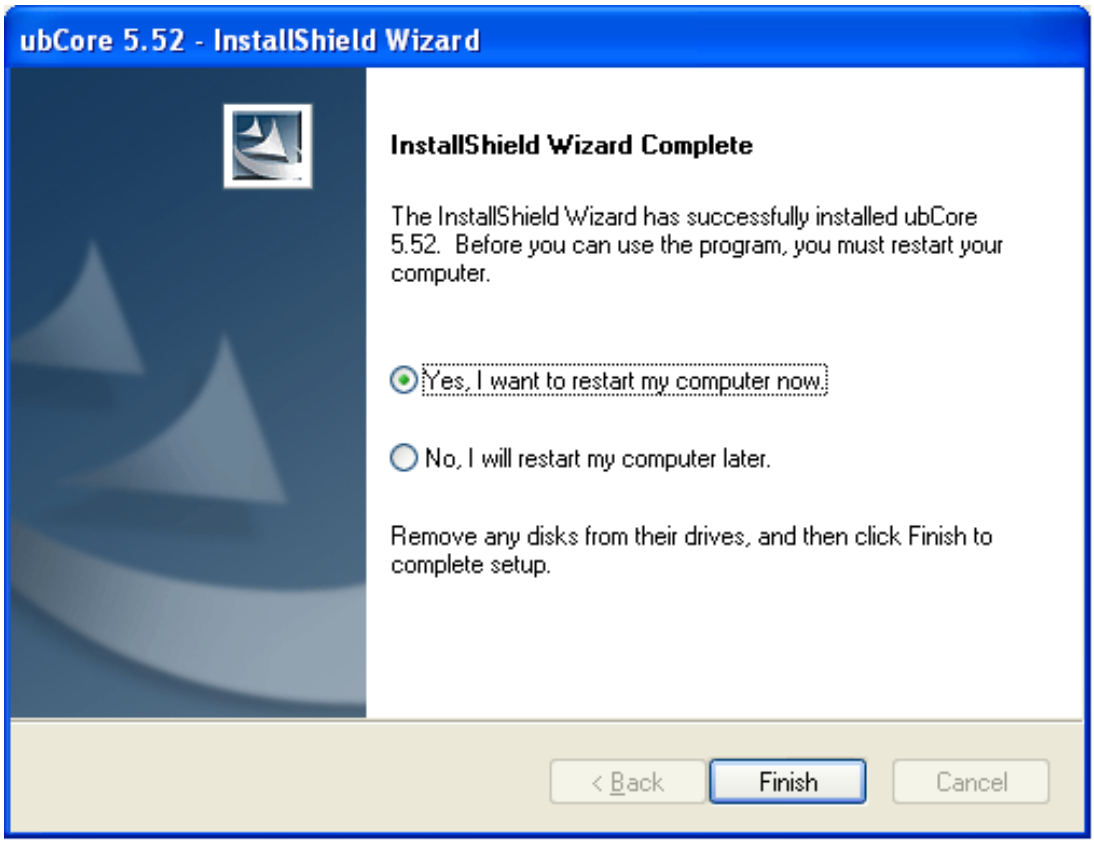
7. Click 'Next' to continue.


ubCore 5.52 - InstallShield Wizard
Select Program Folder
Please select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folder:
ubCore
Existing Folders:
Accessories
Startup
WinRAR
InstallShield
< Back
Next >
Cancel

8. Click 'Finish' to continue.



9. Select "Yes" then click 'Finish' to restart system.


ubCore 5.52 - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed ubCore 5.52. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

7.3 Further Information

For further information about the installation of your POC-176, including driver updates, troubleshooting guides and FAQ lists, please visit the following web resources.

Advantech websites: www.advantech.com
www.advantech.com.tw

Chapter 8

Smart Card Reader Interface

Sections include:

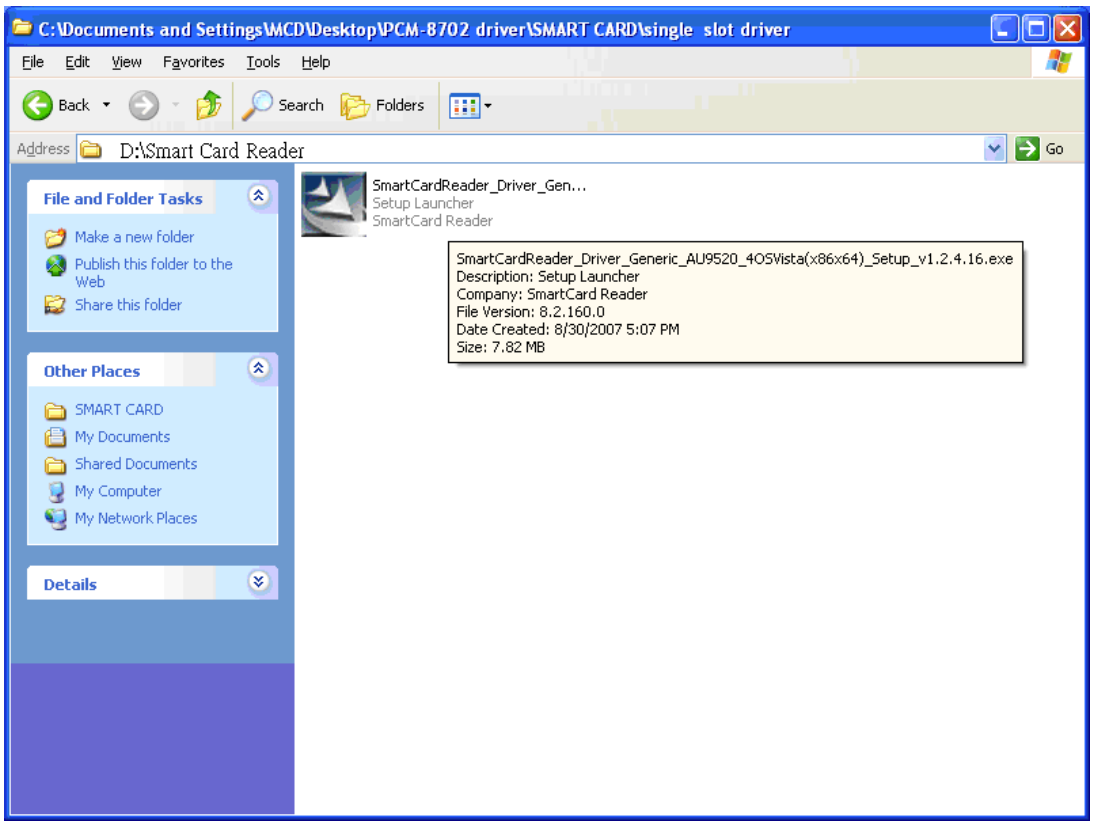
- Introduction
- Driver Installation

8.1 Introduction

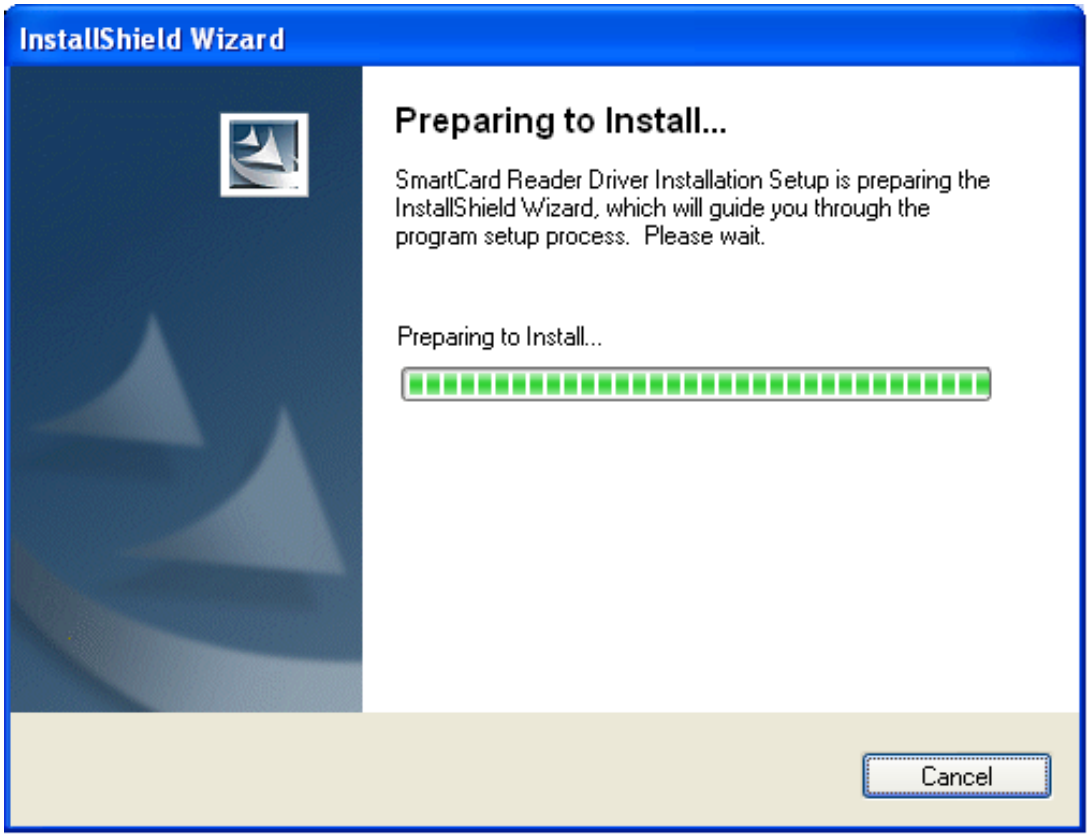
The POC-176 is supported with a system integrated smart card reader interface. The Smart Card reader has built-in help to verify clinician's identification. The Smart Card reader controller is controlled by the system USB interface.

8.2 Driver Installation

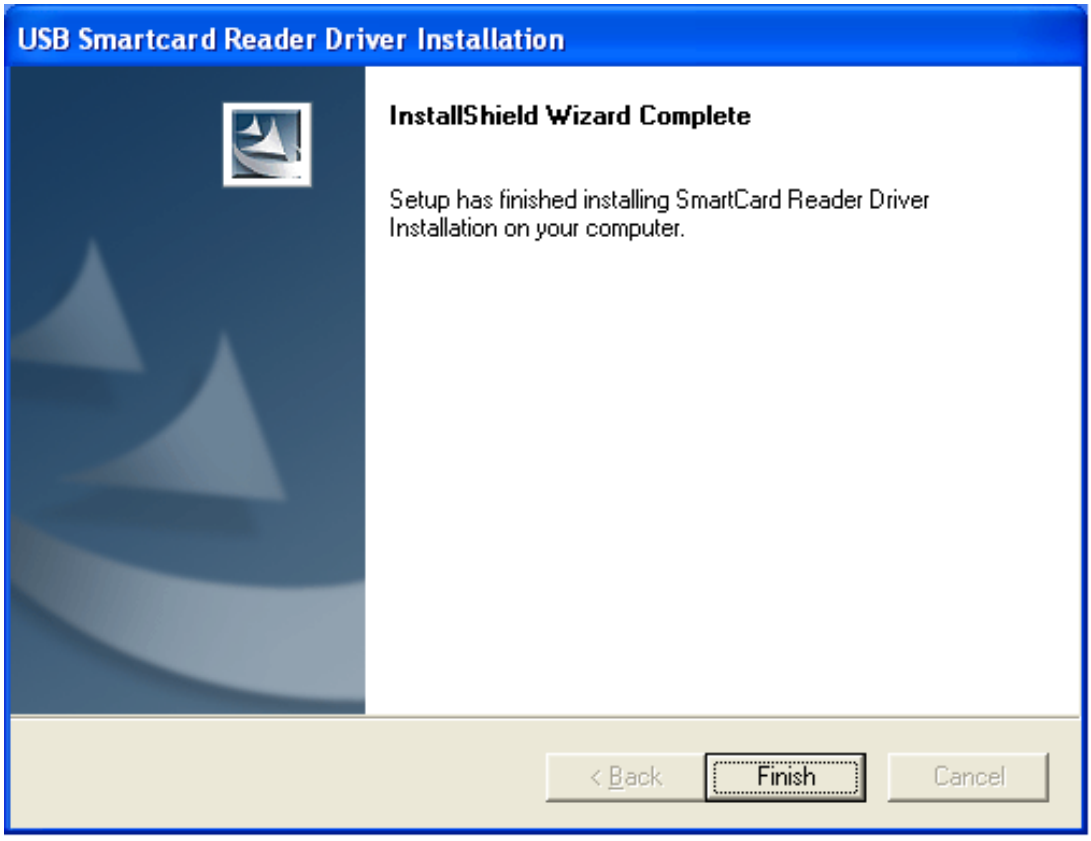
1. Double Click "SmartCardReader_Driver_Generic_AU9520_4OSVista(x86x64)_Setup_v1.2.4.16.exe" in the D:\Smart Card Reader folder. The Install dialog will appear.



2. System will automatically install driver.


InstallShield Wizard
Preparing to Install...
SmartCard Reader Driver Installation Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Preparing to Install...
Cancel

3. The dialog will show InstallShield Wizard Complete; click "Finish".



Chapter 9

Utilities and Hot Fix

Sections include:

- **Introduction**
- **Wake up by External USB Device at S3 Resume (Wake up)**
- **Windows Audio Volume Application**

9.1 Introduction

The POC-176 system needs a specific utility or hot fix to support special functions.

9.2 Wake up by External USB Device at S3 Resume (Wake up)

POC-176 supports three different sleep (suspend) modes. They are:

1. S1: Power On Suspend: System will stop the clock, turn off the LCD backlight, but keep all power on. The user can press any key (mouse or keyboard) to wake up the system.
2. S3: Suspend to RAM: System will stop the clock, turn off most power, not including memory power. All necessary information will be saved in memory. In this sleep mode, the system needs a hot fix be woken up by USB mouse or keyboard.
3. S4: Suspend to Disk (Hibernation): System will stop the clock, turn off most power, include the memory power. All necessary information will be saved to hard disk. In this sleep mode, the user needs to press the power button to wake up the system.

9.2.1 Installation for Windows XP

1. Double click “USBRG.REG” in the D:\Driver\USB folder.
2. Click “Yes” to install this registry information.
3. Click “OK” to close the successful installation information window.

9.3 Window Audio Volume Application

On the front panel of the POC-176 system, there are two buttons to control the speaker volume.

This speaker volume is adjustable by pressing the button; it does not need any software utilities.

However, this speaker volume button cannot modify the windows volume control if user did not install the Advantech Audio Volume application.

9.3.1 Installation for Windows XP

1. Double click "SETUP.EXE" in the D:\Utility\Volume Control folder.
2. Click "Next".
3. Click "I accept the terms of the license agreement" and click "Next".
4. Click "Finish" to close the installation complete window.

Chapter 10

Operational Information

Sections include:

- Plug in the Power Adapter
- Thermal
- Disconnect the Power
- General Safety Guide

10.1 Plug in the Power Adapter

Always leave space around your power adapter. Do not use this equipment in a location where airflow around the power adapter or computer is confined. Always disconnect the power adapter before opening the computer to perform procedures such as installing memory or removing the hard disk.

Warning! *Use only the power adapter that came with your POC-176 system.*

Adapters for other electronic devices may look similar, but they may damage your computer.

10.2 Thermal

When using your POC-176 system, it is normal for the rear metal heatsink to get warm. The rear metal heatsink of the POC-176 case functions as a cooling surface that transfers heat from inside the computer to the cooler air outside. Do not block this heatsink by any soft material.

Warning! *Do not place your POC-176 system on a pillow or other soft material when it is on, as the material may block the airflow and cause the computer to overheat. Never place anything on the system case before turning off the computer.*

Never turn on your computer unless all of its internal and external parts are in place. Operating the computer when it is open or missing parts can be dangerous and can damage your computer.

10.3 Disconnect the Power

The only way to disconnect power completely is to unplug the power cord. Make sure at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Warning! *Your AC cord is equipped with a three-wire grounding plug (a plug that has a third grounding pin). This plug will fit only a grounded AC outlet. If you are unable to insert the plug into an outlet because the outlet is not grounded, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug.*

Warning! *Never push objects of any kind into this product through the openings in the case. Doing so may be dangerous and result in fire or a dangerous electric shock.*

10.4 General Safety Guide

For your own safety and that of your equipment, always take the following precautions.

Disconnect the power plug (by pulling the plug, not the cord) if any of the following conditions exists:

- You want to remove any parts
- The power cord or plug becomes frayed or otherwise damaged
- You spill something into the case
- Your computer has been dropped or the case has been otherwise damaged
- You suspect that your computer needs service or repair
- You want to clean the case

Appendix A

Description of MB Connectors

A.1 Description of MB Connectors

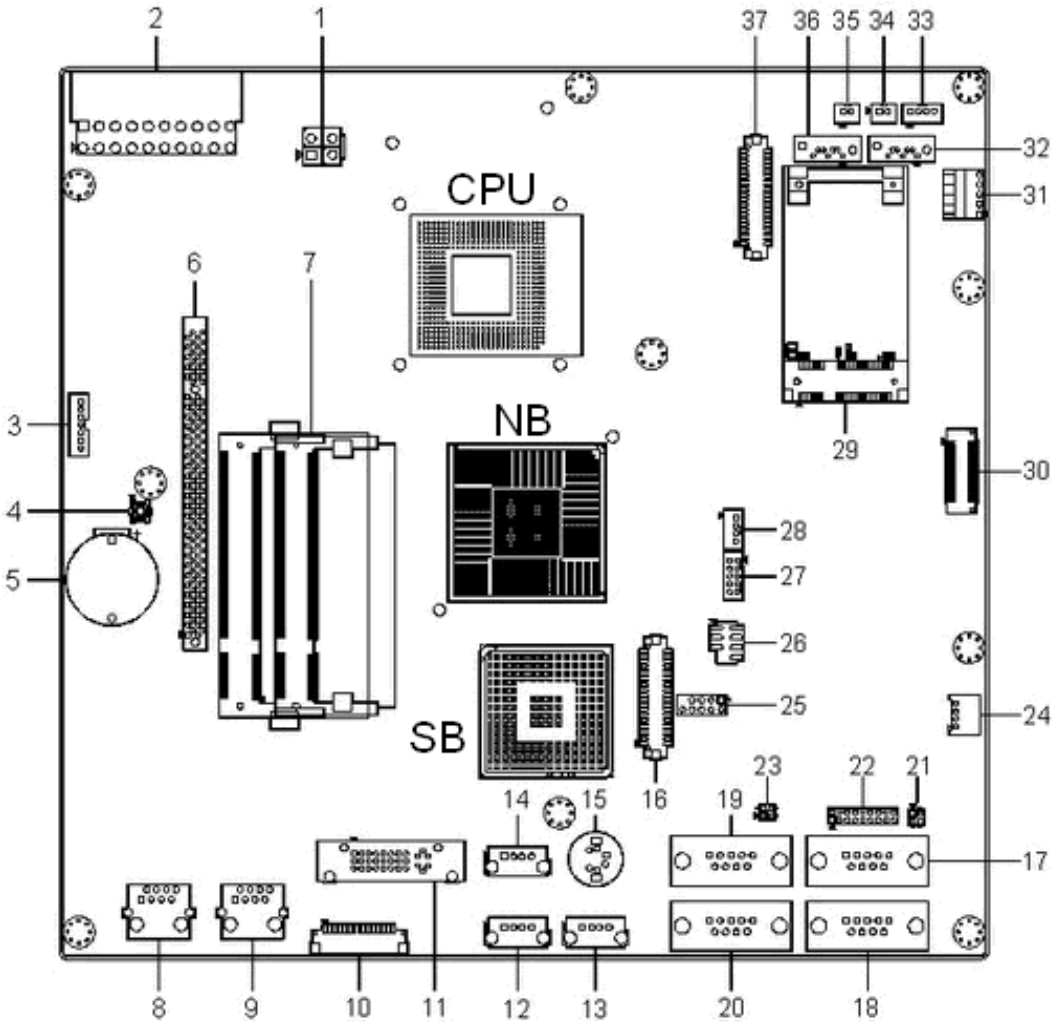


Figure A.1 Top View of POC-176 Motherboard with Local Connectors

No.	Description	No.	Description
1	ATX Power for CPU Connector	20	COM4 Jack
2	ATX Power 20 Pin Connector	21	
3	Inverter Connector	22	
4	Clear CMOS Button	23	
5	RTC Battery Socket	24	Power Button Switch Connector
6	PCI Socket	25	
7	DDR2 SODIMM Socket Connector x 2	26	
8	RJ45 JackLAN 1	27	
9	RJ45 JackLAN 2	28	
10	Touch Enable Volume Up / Down Switch Connector	29	Mini PCI-E Socket
11	DVI Connector	30	Sideboard Connector
12	USB Connector	31	Touch Screen I / F Connector
13	USB Connector	32	SATA Connector 0
14	USB Connector	33	Heatsink Fan Power Connector
15	Keyboard / Mouse Connector	34	SATA Power Connector 0
16	CD-ROM Connector	35	SATA Power Connector 1
17	COM1 Jack	36	SATA Connector 1
18	COM2 Jack	37	LVDS Connector
19	COM3 Jack		

Appendix B

Windows Display Hot Key Function

B.1 Windows Display Hot Key Function

If a user wants to switch the display content to a different display device, such as:

1) Internal LCD Panel (Notebook)
2) External CRT Monitor (Monitor)
3) External DVI Monitor (Digital Display)

The user can press the hot keys below to switch the display device::

Hot Key	Display Device
Ctrl+Alt+F1	External CRT Monitor
Ctrl+Alt+F3	Internal LCD Panel
Ctrl+Alt+F4	External DVI Monitor

Windows will switch the display content to a dedicated display device.

Appendix C

PCM-8702 Jumper settings

C.1 Jumper Locations

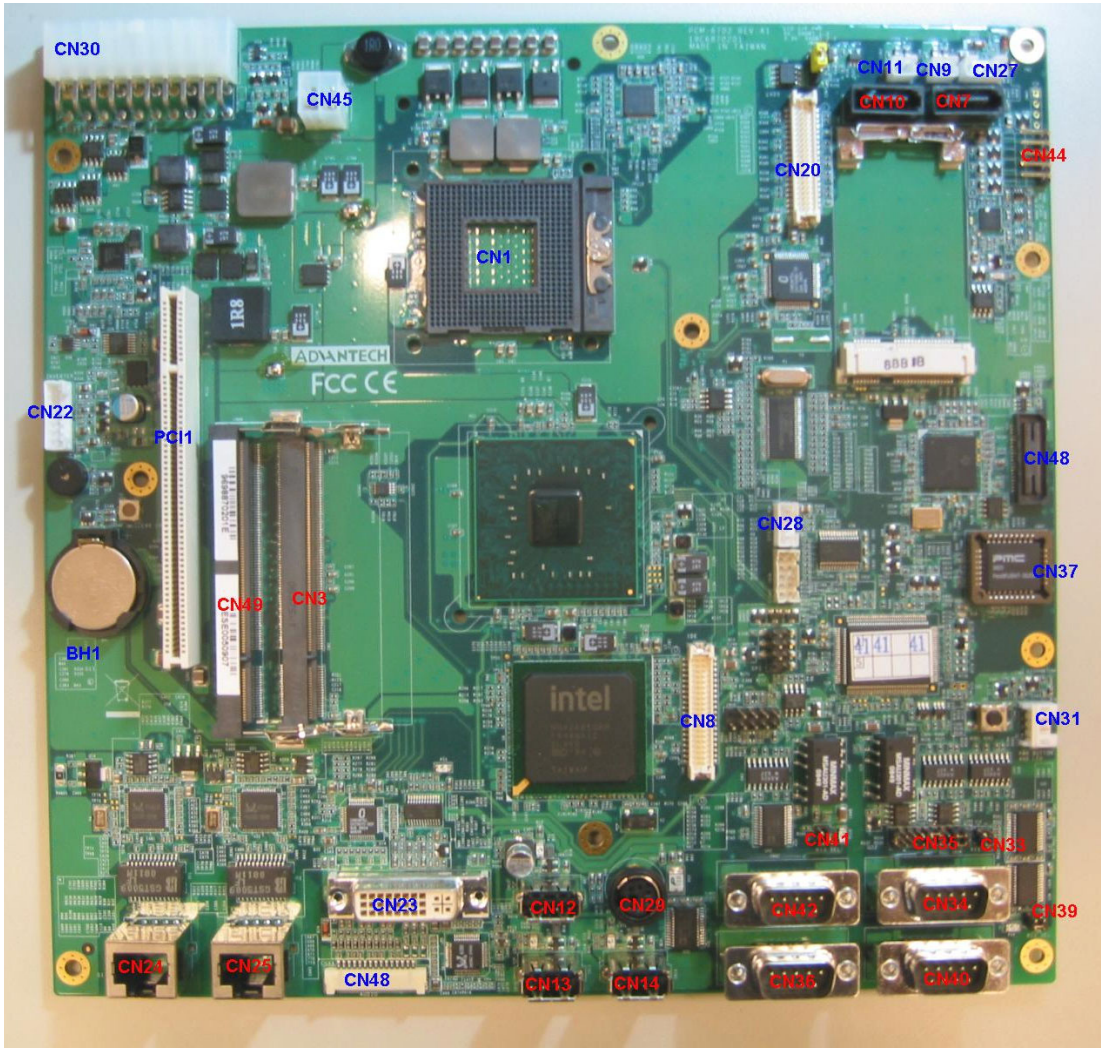


Figure C.1 Jumper Locations

Table C.1: CN33 COM1 Pin 9 Output Configuration	
Description	For COM1 Pin 9 output configuration
Setting	Voltage
(1-3)	5 V*
(2-4)	Floating

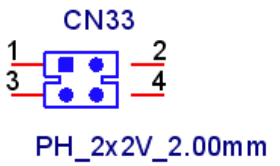


Table C.2: CN39 COM2 Pin 9 Output Configuration	
Description	For COM2 Pin 9 output configuration
Setting	Voltage
(1-3)	5 V*
(2-4)	Floating

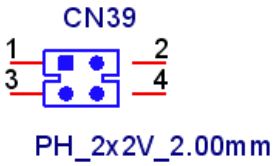


Table C.3: CN41 COM3 Pin 9 Output Configuration	
Description	For COM3 Pin 9 output configuration
Setting	Voltage
(1-3)	5 V*
(2-4)	Floating

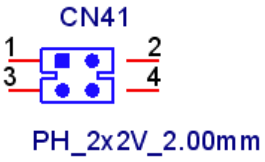
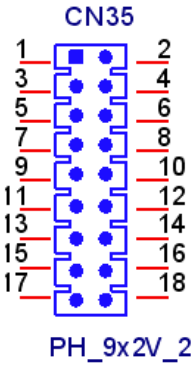
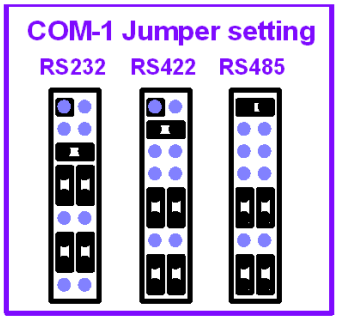


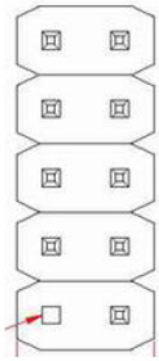
Table C.4: CN35 COM1 RS232/422/485 Output Type Settings	
Description	COM1 RS232/422/485 output type setting
Setting	Function
(5-6), (7-9), (8-10), (13-15), (14-16)	RS232
(3-4), (9-11)(10-12), (15-17)(16-18)	RS422
(1-2), (9-11)(10-12), (15-17)(16-18)	RS485





RS485: 2 Wires type
RS422: 4 Wires type

Table C.5: CN50 Internal USB Port 5 and Port 6	
Part Number	1653005209
Footprint	JH5X2V-P9
Description	PIN HEADER 5*2P 180D(M) 2.54mm DIP NO.9P
Pin	Pin Name
1	+5V
2	+5V
3	USB Port5 D-
4	USB Port6 D-
5	USB Port5 D+
6	USB Port6 D+
7	GND
8	GND
9	
10	NC



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